THE LAND OF SOVIETS

The Land of Soviets

THE COUNTRY AND THE PEOPLE

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A SIXTH OF THE WORLD

Moscow, the capital of the Union of Soviet Socialist Republics, is the country's most important railway hub. Here one sees trains from the distant frontiers, from such remote places as Odessa, Murmansk, Ashkhabad, Vladivostok.... One can get a good idea of how vast the Soviet Land is by counting how many days and nights these trains spend on each run and how many miles they cover.

From Vladivostok on the Pacific coast an express train takes more than a week to get to Moscow, covering the same distance that lies between the equator and the pole. The distance between Murmansk on the Barents Sea and Moscow is equal to that between Sweden and Sicily.

From west to east, the Soviet Union spreads over more than 171 degrees. In the west, the country ends at the Polish frontier near Kaliningrad on the Baltic. Its easternmost point on the continent is Cape Dezhnev on the Chukotsky Peninsula, while at sea it is a bit further—the Ratmanov Island in the Bering Strait that divides America from Asia.

These extreme points are so far apart that when it is daybreak at one of them, it is twilight at the other. When it is 5 a.m. on the Chukotsky Peninsula, it is midnight on Lake Baikal in Siberia and only 7 p.m. in Moscow.

The southernmost point of the U.S.S.R. is on the Soviet-Afghani border, near the town of Kushka in Turk-

menia, while the northernmost is beyond the polar circle, on Cape Chelyuskin, in Siberia.

It is about 2,500 miles from Southern Turkmenia to Northern Siberia. Under the rays of the scorching sun of the Turkmenian subtropics grows the Arabian date-palm, while on Cape Chelyuskin the sea winds often wash ashore ice-floes even in summer.

Spring comes to Turkmenia in the very first weeks of the year. Winter there is a short one, if it can be called winter at all, for the average temperature in January is above zero. The snow melts as soon as it hits the ground. Land is ploughed and wheat is sown as early as January. From the southern frontier spring advances northward. In Moscow, apple-trees bloom towards the end of May; in Turkmenia two months earlier. In the extreme north of Siberia, spring comes only in June—in the tundra, ice breaks on the rivers, flowers bloom. But frosts may be expected any day there. Both summer and autumn are short.

The U.S.S.R. spreads over an area of 8,646,400 square miles, i.e., one-sixth of the populated area of the globe, occupying half of Europe and a third of Asia. It is three times as large as the United States of America and 14 times bigger than Great Britain, France, Italy and Spain put together.

The Soviet Union is the largest state in the world.

FRONTIERS

Soviet frontiers are approximately 37,260 miles long, i.e., one and a half times the length of the equator. A passenger plane going 310 miles an hour would take five days of uninterrupted flight to cover this distance.

The U.S.S.R. borders on Norway, Finland, Poland, Czechoslovakia, Hungary, Rumania, Turkey, Iran, Afghanistan, China, Mongolia and Korea.

PLAINS AND MOUNTAINS

Nature is extremely diverse in the Soviet Union.

Its plains, now rolling like the waves, now flat as a table, spread for thousands of miles. It takes one and a half days for a train to cross the West-Siberian Lowland, but all this while one hardly notices the gradient.

The country's mountain ranges stretch out in a line, one after another, and there are places where they are bound together in mighty massifs. Compared with the earth, some of them are young, like the steep, peaky mountains of the Caucasus; others are old, like the Urals that have become sloping after hundreds of millions of years. There are comparatively low mountains, usually wooded to the very top, as, for instance, the hills in the Far East; and there are mountains like Tien-Shan in Central Asia, with its snow-capped peaks and glittering eternal ice, with vegetation only at its foot.

Physically, the U.S.S.R. may be divided into two almost equal parts with the Yenisei River in Siberia as the demarcation line. With the exception of the extreme south, almost half of the U.S.S.R. physical map west of the Yenisei is green and the rest, brown. This means that the western part of the Soviet Union consists in the main of plains and lowlands, and the eastern is mountainous.

In the centre of the western part—the lowland part—lies its "stone belt," the Urals, which stretches for more

than 1,200 miles from north to south. West of the Urals is the Great Russian Plain, the most densely populated and developed part of the country. East of the Urals is the West-Siberian Lowland. It is most densely populated and developed in the woodless south.

In the south of the western part of the Soviet Union the plains give way to high mountains that range eastward: the Carpathian, Crimean, Caucasian, Pamir, Tien-Shan and Altai mountains.

The highest are the Pamir Mountains, which are called the "roof of the world." Their Stalin Peak, the highest in the U.S.S.R., rises 24,983 feet. At night, even in summer, water freezes on the Pamir, and in the day the sun is merciless.

Almost the entire area in the eastern part of the country, beyond the Yenisei, is occupied by mountains and taiga-covered plateaux. It is there that the vast Central Siberian Plateau lies and the Sayany, Yablonovy and Verkhoyansk ridges rise. There are also mountain ranges in the Far East.

There are many volcanoes off the Pacific coast, on Kamchatka and the Kuriles. The snowy peak of the Klyuchevskaya Hill is almost 16,700 feet above sea level. The volcanoes smoke and from time to time erupt. Then, amidst the subterranean rumble, there rises several miles into the sky a black gas column lighted up from below by crimson flames. It flashes with lightnings and showers the earth with ashes and red-hot stone bombs, while fiery rivers, foaming and hissing, flow out of the crater, filling the air with the odour of sulphur.

The vast plains are excellent for agriculture, and the fields of the Ukraine, Kuban, Volga Area and Western Siberia stretch as far as the eye can see. The Soviet Union

is second to none in the world in the acreage planted to wheat, rye, oats, barley, flax, hemp, sunflowers, potatoes and sugar-beet.

A huge country like the U.S.S.R. needs thousands and thousands of miles of railways and highways. A great many have been built and a great many are under construction. It is important for the country to have most of its freight transported by railways with minor gradients. The calm rivers cutting through the plains carry a considerable share of the cargo.

The mountains, which occupy a lot of space in the U.S.S.R., are useful too. Of course, they do not offer much scope for agriculture, for the fields are either too small or too steep. But humidity and warmth in the slopes of the Tien-Shan, Caucasian and other mountains blend nicely to create the necessary conditions for splendid pastureland.

Industries have been built in the mountainous areas with rich mineral resources, as, for instance, in the Urals. Apatite, a raw material for phosphate fertilizer explored by Soviet surveyors, is being mined in the Khibin Mountains, on the Kola Peninsula, beyond the polar circle. A big town, Kirovsk, has risen there. In the current sixth five-year plan period and in the coming five-year plan periods major industries will be established in the potentially rich East-Siberian mountains.

Until recently, there had been many "white spots" on our map—the unexplored places in the remote and almost inaccessible mountain regions. There are none today. Soviet scientists have surveyed these areas and plotted them on the map. New mountains have been discovered at the bottom of the seas washing the U.S.S.R.

The Arctic Ocean, as was recently established, is cut in two by a high underwater ridge that has been named the Lomonosov Range.

Mountain-climbers have scaled the highest peaks in the U.S.S.R. and even descended into the crater of the Klyuchevskaya Hill. Highways have been built up in the mountains. Up in the clouds across the Pamir, at a dizzy height, zigzags a new motor road of several hundred miles.

SEAS

The Soviet Union's maritime frontiers are twice as long as those on land. The country is washed by twelve seas forming part of the Pacific, Arctic and Atlantic oceans. Some of these seas are big and others are small, some deep and others shallow, some salty and others hardly saltish. The Black Sea does not freeze in winter, while there are ice-floes in the Kara Sea even in July. In the Sea of Azov, the temperature of the water on the surface reaches 86° F. in summer, while in the polar areas icebergs slip into the sea. In the Baltic, off Leningrad, the difference between the flow and ebb is less than two inches, while in the Gulf of Penzhinsk, in the Sea of Okhotsk, the water rises 36 feet at high tide.

From the West, the Atlantic Ocean curves round the European peninsulas and reaches out to the Soviet Union through the Black and Baltic seas. The former glitters in the rays of the southern sun at the feet of the Crimean and Caucasian mountains. The latter—grey when the sky is cloudy and greenish when it is blue—laps the low dunes overgrown with pines.

The Baltic is one of the least salty seas in the world. The fish caught there include herring, sprat and smelt. In the Black Sea it is anchovy, gray mullet, mackerel and bullhead. It is more salty than the Baltic and in summer fishermen net fish that come to fatten there from the salty Mediterranean.

The Sea of Azov is, so to speak, a bay of the Black Sea. Although the smallest in the world, it is distinguished by the density of its fauna and flora.

However, it is not the fish resources that make the Atlantic seas so important for the Soviet Land. The Black, Azov and Baltic seas, wedging deep into the continent, are close to the country's main centres and account for a considerable share of its freight.

The Black and Azov seas are close to the Donbas and Dnieper areas, the Soviet Union's No. 1 coal and steel basins, as well as to the Caucasus and the fertile southern steppes and, since the commissioning in 1952 of the Volga-Don Canal, to the Volga Area. In a number of ports, sea-going tankers take cargoes of oil brought from the Caucasian fields by pipelines or in railway tanks. The manganese ore from Chiaturi is lowered into ships' holds from the wharfs in Poti. Novorossiisk exports cement. Zhdanov on the Azov is the sea-gate for the Donbas anthracite. And in Rostov, Kherson and Odessa, elevators are full of Kuban and Ukrainian grain.

Coasters transport oil, ore, coal and grain to various Black Sea ports, Rumanian and Bulgarian included. Ocean-going vessels ply remote seas, as far as Antarctica, where the Soviet *Slava* flotilla goes whale-hunting.

The Baltic Sea is the direct waterway from the U.S.S.R. to Western Europe, to the Atlantic. It connects the Soviet

Union by water with Poland and the German Democratic Republic. There is a whole chain of Soviet ports on the Baltic coast, the main being Leningrad, Tallinn, Riga, Ventspils, Klaipeda and Kaliningrad. Some of the Baltic ports do not freeze in winter.

The Arctic Ocean washes the Soviet shore through a number of cold seas: the Barents Sea with its bay—the White Sea—the Kara, Laptev, East-Siberian and Chukotka seas.

In the Black Sea it is only the northernmost bays that freeze slightly and for a brief period, but even a small vessel can break the crust. In the northern seas, on the other hand, the ice never melts completely. Only at the very height of the brief polar summer does the crust of ice sever itself from the shore to enable ships to break through the floes along the Siberian coast. But within three months the seas are once again ice-bound and by the following May their ice armour is 6.5 feet thick.

Soviet people are exploring the Arctic, doing research work there. In the years of the first five-year plan periods they blazed the Northern Sea Route along the Siberian coast. This route, connecting the European part of the U.S.S.R. with the Far East, is being expanded with each passing year. A powerful atomic ice-breaker is being built for operation in the Soviet Arctic.

The Northern Sea Route with its refuelling stations, air reconnaissance of the ice-fields and ice-breakers, is needed not only for through traffic. It is by this route that cargoes are sent to and from Siberia's northern regions. In the past, those places were completely isolated from the rest of the country.

Northern Siberia has developed tremendously in recent years: there are new towns and research stations,

the life of the northern nationalities has changed completely. Siberian rivers, emptying themselves into the Arctic Ocean, connect the Northern Sea Route with the inland areas of northern Siberia. In the estuaries are new, well-equipped ports in which cargoes are loaded from ocean-going vessels into river craft and vice versa.

The most important of the Arctic seas is the Barents Sea. Thanks to the warm Gulf Stream current its south-western part does not freeze even in the coldest weather. During the frosty polar night, under the greenish-violet light of the aurora borealis, the Kola Bay is enveloped in wreaths of steam. In winter, it is much warmer there than in Moscow, although the latter is 1,240 miles to the south.

The White Sea is south of the Barents Sea, but since warm currents do not reach it, it is ice-bound for a much longer period. It is only with the assistance of ice-breakers that ships can leave Arkhangelsk in winter, the country's main timber port. On the other hand, Murmansk in the Barents Sea, one of the Soviet Union's most important fishing centres, is ice-free the year round and takes in big cargoes of cod, herring and haddock.

The Soviet Pacific coast stretches from the Korean frontier to the Bering Strait—a distance of almost 3,100 miles as the crow flies and not less than 12,500 with all its zigzags. In the south, the coastal waters attract tropical fish too, while in the north, snowdrifts fall from the rocks even in summer. The Far Eastern seas freeze offshore in winter.

The Pacific skirts the Soviet Union through the Bering Sea and the seas of Okhotsk and Japan. At Petropavlovsk-on-Kamchatka it directly approaches the continent and laps the feet of the volcanoes. In clear weath-

er, the smoking Klyuchevskaya Hill is visible at sea hundreds of miles away. Vladivostok is the main Soviet Pacific port.

The Far Eastern seas are the country's second biggest fishing ground, abounding especially in herring, plaice and salmon. In the Bering Sea one can often encounter whales. The Komandorskiye Islands are famous for their sea bears. The waters off the Kamchatka coast are rich in crabs.

LAKES

The Caspian Sea in the south is the world's greatest lake. Almost equal to the Black Sea in size, it is rough, deep and rich as any other sea. It is one of the Soviet Union's leading fishing grounds, with roach, herring, zander and sturgeon being particularly plentiful. More goods are carried across the Caspian than in any other Soviet seas. It is by this waterway that Baku oil and cotton are transported north and timber south.

The Aral Sea—a lake so big it is called a sea—and Lake Balkhash are situated in the south, in the semi-desert and the desert zone. There are many other lakes too, some of them rich in valuable salts. Lakes are especially numerous in the northwest of the country. Many are interconnected by deep, rapid rivers that are suitable for the construction of hydropower stations. The biggest are lakes Ladoga, Onega, Chudskoye and Ilmen.

The mountain lakes are deep, their waters pure and limpid. The best known is the 5,820-feet deep Lake Baikal in Siberia—the deepest in the world. It lies amidst high woody mountains. The railway line skirting the lake passes through nearly 50 tunnels.

Of other mountain lakes mention should be made of Issyk-Kul in Kirghizia and Sevan in Armenia. The latter lies high up in the mountains and the outflowing Razdan River rushes down through gorges. There is a chain of eight hydropower stations on this river. Part of them, including the most powerful Gyumush station, have already been completed, and the rest will be commissioned in the course of the sixth five-year plan period. Lake Sevan feeds Armenia's hydropower stations and irrigates her cotton fields and vineyards.

In the Pamir Mountains lies Lake Sarez. Formed by a landslide in the Murghab River Gorge in 1911, it expanded fast and is now over 50 miles long and over 1,500 feet deep.

Many big reservoirs have been built in the Soviet Union since the First Five-Year Plan. They came into being along with the new major hydropower stations and canals. There are, for instance, four artificial seas on the Volga—the Moscow, Rybinsk, Gorky and Kuibyshev; one on the Don—the Tsimlyanskoye; one on the Kura—the Mingechaur; and one on the Angara—the Irkutsk.

RIVERS

There are a great many rivers in the U.S.S.R. Some of them, like the Ob, flow calmly across plains. Others, like the Angara and Katun, are full of rapids. The Volga overflows its banks during the spring thaw, while the Amur in the Far East, during the summer rains. The Kolyma in the north is ice-bound eight months a year, while the Rion in sunny Georgia does not freeze at all.

The sources of the main rivers in the European part of the U.S.S.R. are in the middle of the Great Russian

Plain. They include the Dnieper, Don, Western Dvina and Europe's greatest river—the 2,300-mile long Volga.

The main Siberian rivers—the Ob with its tributary Irtysh, the Yenisei with its tributary Angara, and the Lena—flow northward. The Yenisei (measured from the source of the Selenga) is 3,300 miles long. The mightiest river in the Far East is the Amur.

The biggest rivers in Central Asia are the Amu-Darya and Syr-Darya, which empty their waters into the Aral Sea.

Rivers play an extremely important role in the country's life. In the Soviet Union, where the rivers are numerous and cargoes have to be shipped to remote points, river transport—passenger and freight—is cheap and voluminous and as such is of great help to the national economy. Take, for example, the Volga and its tributary, the Kama: rafts of timber and barges with wheat, oil and salt float along the entire course of these two rivers. The Volga is the country's main waterway. Together with its tributaries it accounts for almost two-thirds of all river transport. In Siberia, rivers are the most important arteries for mass transportation of cargoes across the vast expanses lying between the Siberian Railway Line and the Arctic coast.

The length of navigable Soviet rivers is almost equal to that of the railways, which was about 75,000 miles in 1955. The total length of all the rivers is four times greater. But Soviet people have yet to clear many waterways and build many ports in order to take full advantage of their tremendous river network.

There are also artificial waterways. The major canals built since the First Five-Year Plan are the White Sea-

Baltic Canal which connects these two seas, the Moscow Canal which connects the Soviet capital with the Volga, and the Volga-Don Canal which has given the Volga Basin access to the Black Sea through the Don. Today, all the seas of the European part of the U.S.S.R. are connected with one another and Moscow has become "a port of five seas."

In the hot southern areas, river-fed canals irrigate cotton and rice fields. Rivers are now being used to water the central belt of the U.S.S.R., namely, the area off the Volga-Don Canal.

Many rivers are being used to generate power. Big hydropower stations had been built prior to World War II on the Dnieper, Volga, Svir, Volkhov and Rion. The Lenin Hydropower Station on the Dnieper, then the biggest in Europe, is particularly well known. It produces yearly more power than did all the electric stations in pre-revolutionary Russia.

Large-scale hydropower development was begun after the war. In the current five-year plan period, the country's hydropower capacity will be increased almost threefold. Gigantic hydropower stations are being built not only on Soviet European rivers (for instance, on the Volga), but on Siberia's great rivers too.

In water resources, the Soviet Union holds first place in the world.

CLIMATE

The climate is extremely diverse in the Soviet Union.

At the bottom of the mountain depressions, beyond the Verkhoyansk Range in northern Siberia, the temperature in winter falls to as low as 94° F. below zero,

when human exhalation turns into rustling icy dust. In western Georgia, on the other hand, the rose is in bloom.

At one and the same time, without leaving the country, one could see the cold polar night or sunny, ice-free seas and evergreen palms.

But diverse though it is, the climate of the Soviet Union is on the whole moderate, but continental, with great differences between winter and summer temperatures. With a few exceptions, winter everywhere is cold and summer hot.

The difference between winter and summer temperatures grows the more one moves eastward, inland from the Atlantic. This ocean, as in other countries, mitigates the climate of the U.S.S.R.: in winter it raises the temperature and lowers it in summer.

In Leningrad, which is comparatively close to the Atlantic, winter is rather mild and summer not too hot. In Siberia, winter is severe and summer is hot and very suitable for grain, vegetables and apples.

The Arctic tremendously influences the country's climate. Its air masses, meeting no obstacle in the form of mountain ranges, from time to time penetrate deep southward, bringing the cold with them. Thorough study of the Arctic climate is indispensable and in this respect Soviet permanent and drifting polar stations are doing a big job. The first scientific drifting station at the north pole was set up back in 1937. New drifting stations have been operating of late in the Central Arctic.

In the south, in places protected from the north by mountains—on the Caucasian coast, on the southern coast of the Crimea and in certain southern valleys of Central Asia—the climate is subtropical. Here severe winter is

almost unknown and even in January the temperature rarely drops to below zero.

Precipitation decreases as the country recedes east. In the west of the European part of the U.S.S.R., closer to the Atlantic, the climate is rather damp. The area gets a lot of humidity from the ocean, rains are quite frequent.

The southeastern areas of the European part, Kazakhstan, the southern part of Western Siberia and Central Asia are subject to droughts. In summer, the sky there is seldom clouded, rains are rare. Man has to wage a bitter struggle against nature: he sows drought-resistant grain, preserves snow, erects forest belts, irrigates fields.

The climate becomes more continental and dry as one moves farther inland—that is one of the distinguishing features of nature in the U.S.S.R.

In most places winter is cold, and it is because of this that wood is thin-layered, strong and resilient. Soviet timber is well known on the world market for its high quality.

Summer in many areas is hot and dry, and for that reason the grain grown there is excellent. Transvolga wheat, for instance, has twice as much albumen as British, while cotton fibre is thin and strong. Heat and dryness quickly turn starch into sugar. Soviet Central Asia is famous for her sweet grapes and melons. In some southern areas there is very little precipitation and much effort is put into the struggle against droughts and into watering the fields. But once irrigation facilities are built and water is dosed out in sufficient quantities, collective farmers gather bumper harvests.

Eternal frost extends to vast areas in the north and east of the U.S.S.R., especially in Eastern Siberia. The

ground there thaws out at most to the depth of three to five feet. And while that makes house- and railway-building difficult, it helps agriculture. In Eastern Siberia, where precipitation is scarce, the upper layer of the ground that thaws out in summer gives moisture to plants, while the frozen layer below prevents this moisture from seeping away. In recent years, special construction methods have been worked out in the Soviet Union for eternal frost areas.

FROM TUNDRA TO SUBTROPICS

Since the territory of the Soviet Union stretches far from north to south, the sun shines differently at different latitudes, the soil is different and so are the fauna and flora. Soil and vegetation zones succeed one another gradually in their southerly advance.

In the eternal frost extremity it is bogs, in the southern extremity—red soil. In the former it is the dwarf birch and the polar owl, in the latter—the evergreen liana and the rosy flamingo. In the Siberian forest tundra it takes a hundred years or so for a larch to grow as thick as a child's arm, and in the Transcaucasian subtropics a tree reaches 20 feet in height within a few years.

The tundra is the northernmost belt of the U.S.S.R. Woodless, it stretches for hundreds and even thousands of miles along the Arctic coast. All that grows on the peaty and boggy soil is lichen, moss and berries. The lake regions abound in wild geese and ducks.

The brief summer passes and for nine months the earth is covered with a thick blanket of snow. Snowstorms rage in the polar night, the aurora borealis lights up the sky, the mercury drops to 104° F. below zero. The birds flee

south from the cold, and only the ptarmigan and the polar owl remain. The brown polar fox turns white. People dress in furs from head to toe.

Reindeer-breeding is the main occupation of the tundra inhabitants, for reindeer provides man with meat, hide and milk, and may be used for transportation purposes.

In tsarist Russia, the North was a desert, its population was fast dying out. Scientific stations and ports were built in the Soviet Arctic before the war. Factories and plants were erected and towns sprang up. The population began to grow. Agriculture in the extreme North became a key issue. For this purpose, experimental farms were set up. Their experiments in the rigorous natural conditions showed that it was quite possible, though difficult, to cultivate soil beyond the polar circle. Soviet scientists raised early-ripe cold-resistant vegetables. Today, potatoes, carrots, turnips, rapes, radishes and fodder are grown in many parts of the Soviet territory beyond the polar circle.

Somewhat to the south, near the polar circle, the tundra gradually grows into woods. The wide forest belt stretches across the entire country, from the Baltic to Kamchatka. The Soviet Union is the richest forest country in the world. The Olonets pine that goes to make masts, the Vologda fir, the wonderful Far Eastern cedar pine (Korean cedar), the excellent Chuvash oak, the asp that is used for matches, the Karelian birch with its beautiful wood, and the larch that is the best for underwater construction—all of them are famous the world over. Timber cutting in the U.S.S.R. is well mechanized.

The southern border of the forest belt passes in the vicinity of Kiev, Ryazan, Kazan, Tyumen and Tomsk. East of Tomsk, forests occupy the entire area right to

the country's southern frontier. Moscow lies in the south of the forest belt.

In the western part of the country, forests alternate with vast fields. Here farmers raise flax, rye, oats and potatoes. They are now cultivating wheat and maize in the forest belt. There are also numerous meadows, especially along the rivers, and they are essential for animal husbandry, particularly for dairy farming.

The forest belt abounds in swamps. In many places, especially in Byelorussia, large-scale melioration work is in progress.

The eastern, Siberian, part of the forest belt is the country's main supplier of furs. The Siberian taiga gives the shiny ash-grey fur of the squirrel, the silky dark-yellow fur of the sable, the bright fur of the red fox and the beautiful fur of the silver fox.

There are some wonderful "mixed" forests in the southern part of the Soviet Far East. They constitute the so-called Ussuri Taiga where north and south blend in a most unique way: the vine entwines the fir, cranberry grows next to the lotus, and the sable and the tiger are close neighbours.

Foliage trees—the elm, hornbeam, oak, aspen, maple, the Manchurian nut-tree, the white Amur lilac, the Amur linden, the white, yellow and black birches, the Manchurian apple-tree, the Ussuri pear-tree and the mahogany—form an inaccessible thicket. There are numerous rare plants: the beautiful Amur cork-tree, the Schmidt birch that is famous for its durability, the aralia bush with its feathery leaves. And over these foliage trees tower the Korean cedars, some of them as high as a ten-storey house and producing as much as 220 pounds of nuts. The trees are intertwined with creepers.

In the western part of the Soviet Union, the forests gradually give way to the steppes in the south. Between the forest and steppe belts lies a strip in which forests dot the steppe. In the European part of the U.S.S.R. they are chiefly oak woods, in Western Siberia—birch.

The steppe belt stretches uninterruptedly from west to east. The wide open sunny spaces of the Ukraine lie in the western part of the steppe-and-forest zone, from the Carpathians to the right bank of the Don. Vast wheat, maize and sugar-beet fields stretch beyond the horizon. East of the Don, the steppe goes in a wide strip to the Altai and thence, interrupted here and there, to the Transbaikal area.

The greater part of the steppe belt, and the steppe-forest zone is highly fertile black earth, which takes up an area almost 3,100 miles long and several hundred miles wide. Seven-tenths of all the cultivated land in the U.S.S.R. is concentrated in the steppe and steppe-and-forest regions—the country's No. 1 granary.

In the southern steppes of the European part of the U.S.S.R. untilled land may be found only in reserves, where it is used for scientific purposes. One of these is the well-known Askania-Nova Reserve in the Ukraine where antelopes, deer and ostriches brought from abroad live in freedom.

In the east, in Siberia, on the other hand, there had been a great deal of virgin fertile steppeland. It is now being energetically put under the plough and planted chiefly to wheat. More than 86,450,000 acres of this land have been cultivated in the past three years.

Formerly a backward area, Siberia has changed completely in Soviet years. It now has its own industry that is growing rapidly, hydropower stations, completed and un-

der construction, new railway lines that are being electrified, big cultural centres with universities, splendid theatres and scientific institutions. It has achieved considerable progress in large-scale, mechanized agriculture. The next few five-year plan periods will bring Siberia unseen prosperity.

Forest belts are being erected and ponds and reservoirs built in the steppe and steppe-and-forest regions with dry climates. These will make for bigger and better harvests.

From the Lower Volga east to Lake Balkhash and from the Stalingrad-Aktyubinsk-Akmolinsk line south to the Central Asian mountains stretch the semi-desert and desert belts, which occupy a considerable part of Kazakhstan and Central Asia.

The semi-desert lies closer to the north, but the climate is very dry and vegetation scarce. The soil contains too much salt. Odoriferous wormwood and stiff salt-worts grow in patches on this arid soil.

Farther south, the semi-desert grows into desert. The biggest in the Soviet Union are the Kara-Kum and Kysyl-Kum deserts. The heat in the desert is so terrific in summer and the sand so hot that one can easily bake an egg in it. There are almost no rains. Desert pastures are used for sheep and camels.

The grey desert soil becomes fertile when irrigated. River-fed canals are turning sections of the desert into flowering gardens and ripening fields. The oases are situated mostly on the southern edge of the desert, where the rivers descend from the Central Asian mountains.

Cotton is the main crop cultivated in the oases.

For a long time irrigation in Central Asia was as primitive as thousands of years ago. Construction of irrigation facilities began under Soviet power, when land

and water became public property. The irrigated area has almost doubled.

New irrigation canals are now being built in the desert belt. The biggest will be the Kara-Kum Canal, which will bring the Amu-Darya waters to vast expanses in Turkmenia. The canal is to be nearly 620 miles long and the first section will be commissioned in the current five-year plan period.

Humid subtropics are in the Southern Caucasus, on the Black Sea coast and partly on the Caspian coast. Winter here is the mildest in the Soviet Union, summer is hot and rainy. Plants are in bloom the year round. Violets and veronica blossom in December, nut-trees in January, apricot-trees in February, almond-trees in March.

Numerous holiday homes and sanatoriums have been built on the seashore. Workers from all over the country rest and undergo medical treatment in Sochi, Sukhumi, Gudauta, Gagra, Tsikhis-Dziri and at other resorts.

But the subtropics are more than just resorts. Tea, citrus fruits and oil-bearing plants are grown there.

It is dry and hot on the southern coast of the Crimea, in the lower reaches of the Kura River in Azerbaijan, as well as in some valleys in Tajikistan and Turkmenia. There are almost no frosts in winter and almost no rain in summer. These are the dry subtropics and the fields have to be irrigated. Apart from cotton they produce figs, almonds, rubber, olives and citrus fruits.

In certain parts of the country, especially in the south and east, there are alpine regions with splendid meadows that serve as pastures.

In the southern mountains there are wild nut and fruit forests—one of the wonders of the vegetable kingdom. These forests stretch for many miles and abound in nuts,

pistachios, alychas, apples, plums, barberries and almonds. These fruit forests are being protected, extended and cultivated.

The Soviet Land is rich indeed in natural resources and the Soviet people are utilizing them to advance their economy.

MINERAL WEALTH

Mineral resources in tsarist Russia were very little explored. It was believed, in fact, that she accounted for only one per cent of the world's iron ore resources, one per cent of the phosphorites and three per cent of the coal. Absolutely nothing was known of the nickel, potassium, boron, sulphur and bauxite deposits.

Rapid industrial development in the U.S.S.R. was attended by expansion of survey work. Geologists have proved that the Soviet Union is extremely rich in mineral resources.

The Russian and Siberian plains, the ancient Urals and the mountain ranges in Kazakhstan, the massive chain of mountains stretching from the Carpathians via the Crimea, the Caucasus and Central Asia to Siberia—all of them are rich in minerals.

The Soviet Union is first in the world in iron ore. It has colossal reserves in the so-called Kursk Magnetic Anomaly and plenty of them in the Ukraine and Urals. Huge deposits have been discovered near the town of Kustanai in Kazakhstan, in southern Yakutia and other places. The Soviet Union also leads in manganese, copper, lead and tungsten.

The U.S.S.R. has huge oil reserves (the biggest in the world). Before the Revolution, the chief oilfields were in the Baku area in the Transcaucasia. Geologists

have discovered rich deposits between the Volga and the Urals. This area has come to be known as "The Second Baku" and produces much more oil than the Transcaucasia.

Considerable oil deposits have also been found beneath the Caspian Sea. In the Baku area, oil wells are being worked at sea.

The Soviet Union has very rich coal basins, like the Kuznetsk Basin in Siberia where some of the layers are over sixty-five feet thick. A new industrial area—the Pechora Basin with the town of Vorkuta—appeared in the northeast of the European part of the U.S.S.R. during the Second World War. It also possesses two-thirds of the world's peat reserves.

Apatite has been discovered in the Khibin Mountains and phosphorites in Kazakhstan. There is more potassium in the U.S.S.R. than in any other country.

The country is rich in minerals, but this wealth has not been surveyed to the full. Soviet scientists are looking for new resources. Big diamond deposits were recently discovered in Yakutia.

POPULATION

With a population upwards of 200 million—a great deal more than in any country in Europe or America, the Soviet Union comes third in the world after the People's Republic of China and India.

The population of our country is growing rapidly. It increased by 16,300,000 in 1951-55.

The Soviet Union is a country of numerous nationalities, big and small. The Russians, for instance, number more than 100 million, while in the Caucasus there is

one nationality inhabiting just one mountain village. The Caucasus, incidentally, is especially multi-national. There are twenty different nationalities in one little Daghestan alone.

Soviet school children are taught in more than 100 languages. These languages are as different as the appearance and the past of their people. There are, for instance, Georgian manuscripts of 15 centuries ago and there are, on the other hand, the inhabitants of Sakhalin who got their own written language only in the Soviet years, as did some forty other nationalities.

The Russians inhabit the central, northern and partly southern regions of the European part of the country, as well as the Urals, Siberia and the Far East. Quite a few live in other parts of the U.S.S.R.

The Ukrainians, as well as the Moldavians, live in the southwest, the Byelorussians, Lithuanians, Letts and Estonians in the west, the Karelians in the northwest.

The north and northeast of the European part of the country is populated by the Komi and Nentsi, and the east by the Tatars, Udmurts, Bashkirs, Mari, Chuvashes and Mordvinians.

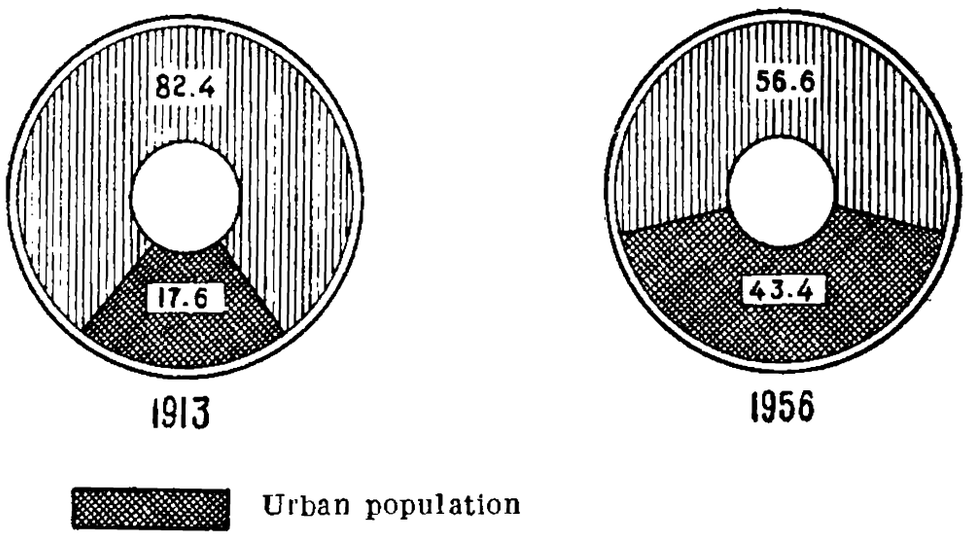
The Caucasus is inhabited by the Georgians, Azerbaijanians, Armenians, Ossetes, Kabardinians, Abkhazians, Kumyks and many other nationalities, while Kazakhstan and Central Asian republics are populated by Kazakhs, Uzbeks, Tajiks, Turkmen, Kirghiz, etc.

In Siberia and the Far East, apart from the Russians, there are the Buryats, Khakassi, Tuvinians, Yakuts, Evenks, Chukchi and Koryaks.

All the nationalities of the U.S.S.R. enjoy equal rights, irrespective of their number and race.

In tsarist Russia, the majority of the population lived in the countryside. Rapid industrial development in the Soviet Union has considerably increased urban population and it now constitutes almost half of that of the whole country.

The growth of the urban population is due to the expansion of old towns and construction of new ones. In Soviet



Ratio of the urban and rural populations (per cent)

years, the number of towns has increased by several hundred. Two-thirds of all the towns in the Urals, Siberia and the Far East are new and so are half of those in the national republics of the East. The biggest of the new towns are Magnitogorsk in the Urals, Karaganda in Kazakhstan, Stalinsk and Norilsk in Siberia, Komsomolsk and Magadan in the Far East, Stalinabad in Tajikistan, Rustavi in Georgia and Kohtla-Järve in Estonia.

Moscow is an excellent example of the reconstruction and growth of old towns. All the monuments of remote past and especially the Kremlin with its ancient cathedrals and other buildings have been carefully preserved. At the same time, reconstruction work is going apace and most

of the city's districts have completely changed in appearance.

Over 1,196,000 square yards of living space are built annually in Moscow. In the five years ending 1960 the capital will get another 13,156,000 square yards—in other words, a whole city almost as big as pre-revolutionary Moscow, but incomparably more beautiful and comfortable.

In Soviet years a Metro has been built in Moscow and Leningrad (it is being constantly extended) and there are several multi-storey houses, including the world-famous Moscow University. There is the huge new stadium in Luzhniki, which will be the main venue of the Sixth World Youth and Student Festival this summer.

Moscow is the most populated city in the Soviet Union—there are something like 5,000,000 people in it, not counting the suburbs. It is the country's biggest industrial and cultural centre. It is the heart of the Soviet Land.

U.S.S.R.—A LAND OF WORKING PEOPLE

WORKER-PEASANT POWER

In the autumn of 1917, at the height of World War I, there occurred an event which exerted and continues to exert a tremendous influence on world history. That event was the Great October Socialist Revolution accomplished by the workers and toiling peasants under the leadership of the Communist Party. It overthrew for all time the hated regime of lawlessness, slavery and national oppression.

The October Revolution led to Russia's withdrawal from the imperialist war that had brought the country to the very edge of national ruin. It put an end to the political power of the landlords and capitalists, placed it in the hands of the working people and paved the way for turning backward Russia into a mighty industrial power. The workers and the peasants rightfully became the real masters of their country.

The Second All-Russian Congress of the Soviets of Workers' and Soldiers' Deputies, which opened in Petrograd on October 25 (November 7, new style), 1917, formed the first worker-peasant government in the world—the Council of People's Commissars—with V. I. Lenin at its head, and adopted the historic decrees on peace and land. The Decree on Peace proposed to the belligerents immediately to cease hostilities and start negotiations for a democratic peace without annexation and

indemnities. The Soviet Government thus raised aloft the banner of struggle against the horrors of imperialist wars.

The Decree on Land put an end to the then existing system of landownership by confiscating the landlords' estates and distributing them gratis among the tillers. Thus, on the very first day of its existence, the Soviet Government did what the peasants had fought for and dreamed of for many centuries.

The Soviet Government introduced an eight-hour working day and decreed workers' control over production. The banks, railways and merchant marine were taken away from the capitalists. Heavy industries were nationalized shortly after the establishment of workers' control over production. All these measures proved to be factors of paramount importance for the country's development. The economic positions of the landlords and capitalists were completely shattered.

The enemies of the Revolution—the overthrown exploiting classes—refused to reconcile themselves to defeat and, aided and abetted from abroad, launched an armed struggle against the worker-peasant government. The sanguinary Civil War lasted for several years. At the same time, the country was subjected to armed intervention and to a cruel economic blockade. Supported by the working masses, the young Soviet Republic emerged victorious from all these ordeals, and succeeded in overcoming the grave aftermath of the world and civil wars and intervention—famine and economic dislocation. Moreover, within an historically brief span, the Soviet people built up a powerful industry and completely transformed agriculture.

Speaking on the day the Great October Revolution was victoriously accomplished, Vladimir Ilyich Lenin

said: "This day marks the beginning of a new phase in the history of Russia, and this third Russian revolution will finally lead to the victory of socialism." History has fully confirmed this prophecy.

The new, socialist society has won in the Soviet Union. A new system, based on the social ownership of the instruments and means of production, has been established. An end has been put to exploitation of man by man. The U.S.S.R. has become a mighty socialist power.

The Union of Soviet Socialist Republics, says the 1936 Constitution, is a socialist state of workers and peasants.

Successful socialist construction has done away with the conditions in which a handful, holding possession of the weapons of production, lived at the expense of the vast mass of urban and rural toilers. The landlord class ceased to exist after the nationalization of land. The capitalist class disappeared after the nationalization of factories and plants, banks and commercial enterprises. The last to vanish were the kulaks.

Soviet society thus consists of two classes: the workers and the peasants. But these classes also have changed considerably. Under capitalism, the workers are deprived of means of production; in the U.S.S.R., they own them and are not subjected to any exploitation. Neither do collective farmers know what oppression is. They work their farms with state technical assistance and cultivate land that has been placed at their disposal by the state gratis and for all time.

The changes in the economic and class structures have made possible a far-reaching cultural revolution. The results are the elimination of illiteracy among millions of people, increasingly broader participation of

the people in state affairs, creation of a numerous reserve of specialists in all branches of science, technology and culture, propagation of progressive ideas among the masses. Marxism-Leninism—the ideology of freedom of the working people and of equality and friendship of the nations—has become the dominant ideology in the U.S.S.R.

A distinguishing feature of Soviet society is the community of economic and political interests of the workers, peasants and working intelligentsia. Together they accomplished the Revolution, together they defended the country against attacks from without, together they have achieved socialism. The common goal—the building of communism—unites these classes all the more. The unity of the Soviet people was best revealed in the struggle against the Nazi hordes. And it is this unity that enabled them within a few years to heal the wounds of war and launch out on large-scale peaceful construction.

The Soviet Union was the first country to set up the dictatorship of the proletariat. The leading role in Soviet socialist society belongs to the working class. The reason for this is that by its position in social production the working class is the most progressive and revolutionary class of today. It guides the working people in the struggle for the building of communist society and sets an example of conscious fulfilment of the great tasks of this struggle. At the same time, the working class utilizes its leading position in society constantly to strengthen the friendship of the two toiling classes. The worker-peasant alliance is the main basis, the solid foundation of the Soviet state.

The Soviets of Working People's Deputies are the people's organs of power. They constitute the political

foundation of the state. All the power in the country is concentrated in the hands of the soviets—from the U.S.S.R. Supreme Soviet down to city and rural soviets.

The soviets are the most representative organizations of the masses. Their strength and significance lie in the fact that, being mass organizations, they represent all the working people of the country. Among the deputies to the U.S.S.R. Supreme Soviet are workers, engineers, peasants, agronomists, zootechnicians, combine operators, teachers, physicians, scientists, writers, artists and servicemen.

Any Soviet citizen may be elected a deputy.

Deputies to the U.S.S.R. Supreme Soviet include high-speed turner P. Bykov, miner I. Valigura, weaver M. Materikova, collective-farm chairmen M. Posmitny (Ukraine) and K. Orlovsky (Byelorussia), engineer Z. Sabitova of Kazakhstan, Tuvan writer S. Toka and composer V. Solovyov-Sedoi.

The miners of one of the Donbas collieries sent hewer Serbinovich to look after their interests in the Supreme Soviet. This miner has earned his fellow-workers' esteem by his conscientious work and initiative. Another deputy, representing collective farms in one of the districts of the Ukraine, is Kirichenko, a milkmaid for the last twenty years.

Representation depends on the role a soviet plays in the state system, on the area of its activity. But the class essence is one and the same everywhere. The soviets are all made up of representatives of the working class, collective farmers and intellectuals. And it is through the soviets that the best representatives of the people govern the country in the name of the people.

The overwhelming majority of the deputies are people over 40 years of age, i.e., people with vast experience. Many of them have been decorated and awarded the titles of Hero of the Soviet Union and Hero of Socialist Labour.

Of the 844,337 deputies elected in 1957 to the local soviets in the Russian Federation, 54.5 per cent are non-Party people. But Communist and non-Party deputies pursue the same policy and that explains why the people support the soviets and why their activity, which accords with the vital interests of all the working people, is fruitful.

Soviet power is rooted deep in the people. This finds expression not only in the fact that all the citizens actively participate in the elections of government organs, but also in the fact that the entire people take part in administrating the country.

More than 1,500,000 deputies were returned to the soviets in the last elections. Each deputy gets a mandate from his electors, i.e., proposals whose implementation they consider necessary. The activity of the soviets is guided by these mandates. The will of the people is thus translated into deeds through the soviets and their organs. At the same time, the mandate is a programme of action for the deputy himself. He is duty-bound to implement his electors' proposals. From time to time he reports to them and receives a new mandate.

A deputy may be recalled if, in the opinion of his electors, he has failed to justify the trust placed in him.

Millions participate in the administration of the state through the permanent commissions of the soviets which take care of vitally important issues (finances, local industry, public health, public education, etc.). Members

of these commissions are elected by the soviets from among their own deputies. But that does not mean that it is only deputies who work on these commissions. In Byelorussia's 10,000 permanent commissions there are over 47,000 deputies and nearly 50,000 workers, collective farmers, office employees, housewives. The Tatar Autonomous Republic's local soviets have more than 6,000 permanent commissions, with scores of thousands of urban and rural toilers working on them.

All told, apart from the deputies, there are over 1,300,000 people working on the permanent commissions in the U.S.S.R.

There are other public organizations that effectively assist the soviets and their agencies: street committees, house management commissions, etc. In Gorky, for instance, there are about 400 street committees with thousands of members. They help to improve the city's amenities and sanitation, organize children's leisure.

The authority of a representative organ of government depends to a considerable degree on the powers it is endowed with. The soviets deal with all the main state, economic and cultural issues on their territory. They examine and approve economic plans and budgets. The following example is illustrative of the scope and scale of the work done by soviets: in 1955, the Gorky City Soviet approved the annual budget, discussed the question of improving the local industry, trade, transport and amenities, and reviewed the results of the school year. In 1956, with the active participation of the population, it worked out and implemented a comprehensive plan of housing and cultural construction, and there were almost twice as many houses built as in 1955.

That the Soviet state is genuinely democratic may be seen from the fact that the Government consults with the people and takes its wishes into consideration on all important questions of socialist construction. For instance, the draft of the U.S.S.R. Constitution was discussed on a nation-wide scale for six months, with the people submitting their proposals. In 1956, the people discussed the draft pension law and this year the Party and Government's proposals on the improvement of management in industry and construction.

Conferences of workers are one of the forms of enlisting the masses for participation in state affairs.

The national conference of young builders, held in Moscow in April 1956, seriously criticized the central administrative bodies. The young builders submitted demands to the Ministry of Power Station Construction, pointing out that it had not created good living conditions for the builders of the Bratsk Hydropower Station. They also reproached the Ministry of Culture for not taking any measures to improve their cultural facilities.

In recent years there have also been conferences of machine and tractor station, railway, agricultural, restaurant and other workers. Such conferences, as a rule, bring out the latent reserves of a given branch of the economy and help to develop it. They usually adopt appeals by the participants to their fellow-workers.

* * *

There is a whole number of organizations in the Soviet Union: the soviets, trade unions, the All-Union Lenin Young Communist League, co-operatives, cultural-educational and other associations.

Who guides all these organizations, and how? Who directs all their efforts towards one and the same goal?

That job is done by the Communist Party of the Soviet Union. This Party, founded by V. I. Lenin, has upwards of 7,000,000 members. According to the Constitution, it is the leading core of all organizations of the working people, both public and state. It unites the most active and politically conscious citizens in the ranks of the working class, peasantry and intelligentsia.

The heroic struggle waged over years by the Communist Party for the interests of the working people won it their trust and support. It was the leader and organizer of the October Revolution. It was under its leadership that the Soviet people crushed the Nazi invaders. It is the Party that is successfully directing the struggle for the construction of a new society.

The C.P.S.U. is the political leader of the Soviet people. Its organs do not exercise the functions of any state or public organizations, neither do they exercise authority over them. The Party directs the activities of these organizations through the Communists working in them. There is a Party group at every enterprise, construction site, state farm and institution. These groups strive for the implementation of the Party's decisions and instructions by means of persuasion of both the administration and the rank-and-file workers of their organization. The efficacy of this method of leadership has been proved by the entire course of socialist construction in the U.S.S.R.

The Communist Party is not afraid of telling the people the truth. It boldly reveals shortcomings and defects in industry, agriculture and the state apparatus, and

mobilizes the working people for a decisive struggle against these shortcomings.

The Communist Party is the only political party in the U.S.S.R. and there are definite historical reasons for that. Before the October Revolution there were several bourgeois-landlord parties in Russia, but they disappeared along with the classes whose interests they defended. There were also the petty-bourgeois Social-Revolutionaries and Mensheviks. Alarmed by the struggle of the rising masses, they showed their real face by joining the counter-revolutionaries and turning against the people. By their own experience our country's workers and peasants saw that the Communists were the only party fighting selflessly for their happiness and leading them along the right path.

The activity of the Communist Party is guided by the vital interests and aspirations of the two classes of Soviet society—the working class and the peasantry. It enjoys the trust of millions of working people and therein lies its strength and prestige.

There are thousands of ties binding the C.P.S.U. and the various mass organizations. A particularly important role in that is played by the trade unions—the non-Party voluntary organizations uniting 46,000,000 persons, i.e., almost all the workers and employees.

Acting in the name of the workers and employees, the factory, transport, construction, machine and tractor station, state farm and other trade-union committees, conclude collective agreements with the administration. The trade unions strive for the fulfilment of national economic plans, for the enhancement of workers' skills, for the improvement of their working and living conditions.

Occasional infringement of the interests of Soviet working people is still possible despite the fact that they are protected by law. Defence of the workers' rights is one of the main tasks of the trade unions.

Soviet trade unions operate numerous holiday homes and sanatoriums. Also concentrated in their hands are such important cultural facilities as palaces of culture, clubs and stadiums. In 1956, Soviet trade unions had over 26,000 libraries, 10,500 clubs and palaces of culture, and 1,324 stadiums.

Apart from all this activity, trade unions in the U.S.S.R. carry out political tasks. According to the Constitution, they have the right to nominate candidates in the elections to all the soviets, the Supreme Soviet included.

The Communist Party relies on trade-union support in implementing mass measures, particularly those of production and cultural nature. The Party influences the entire mass of non-Party workers and employees through its members in the trade-union organizations.

Other mass organizations of the working people are the producers' (collective farms, handicraft artels) and consumers' co-operative societies, with the main role played by the agricultural producers' co-operatives, i.e., the collective farms uniting the peasants on a voluntary basis. A great many rural toilers are members of consumers' co-operatives: over 33,000,000 in 1956. One of the tasks of these co-operatives is the procurement of food-stuffs and sale of commodities. They also sell collective-farm produce on commission.

By promoting the co-operation movement in all its aspects, the Communist Party draws the broad peasant

masses into communist construction and strengthens the ties between town and country.

The Young Communist League with a membership of 18,500,000 is the mass organization of the worker and peasant youth. The task of this non-Party organization is to help the state in the communist education of the people. On the instructions of the Party, the Young Communist League directs the activities of the multi-million Young Pioneer movement.

The history of the Young Communist League is full of examples of lofty patriotism. Nikolai Ostrovsky's *How the Steel Was Tempered* and Alexander Fadeyev's *The Young Guard*, both translated into many languages, paint a vivid picture of the heroism of the Y.C.L. members. Komsomolsk, a town built by young Soviet men and women in the Amur taiga, was named after the league. When the country faced the task of putting millions of hectares of virgin and fallow land under the plough, Y.C.L. members formed the core of the hundreds of thousands of people who volunteered to carry it out. In 1956, thousands of young Soviet patriots responded enthusiastically to the Party and Government's call and went to construction sites in Siberia, the North, and the Far East. The Young Communist League is not only the Communist Party's reliable and loyal assistant, but also a reserve for replenishing its ranks.

The state and public organizations, uniting tens of millions of Soviet workers, peasants and intellectuals, have complete confidence in the leadership of the Communist Party and implement its policy as their own.

Among other public organizations are the U.S.S.R. Committee of Youth Organizations, the Soviet Women's

Committee, the Soviet Peace Committee and the Society for Cultural Relations with Foreign Countries (VOKS).

Soviet people maintain broad contact with progressives abroad. Urged by the desire to consolidate peace and promote friendship with the working people of all countries, they take an active part in such organizations as the World Federation of Trade Unions, Women's International Democratic Federation, World Federation of Democratic Youth, etc.

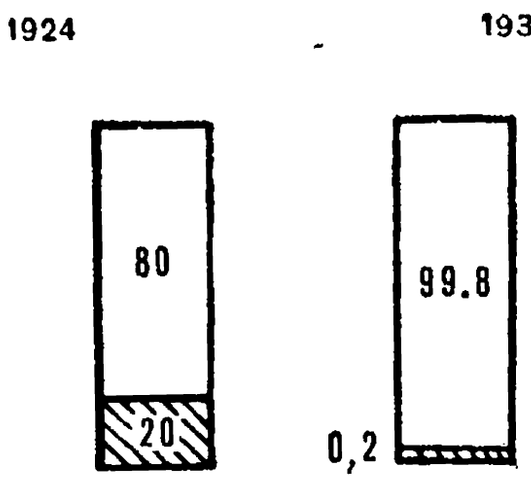
THE COUNTRY'S WEALTH BELONGS TO THE PEOPLE

What Is Socialist Property. The determinant factor in the structure of any social system is the question of who owns the means of production—society or private individuals.

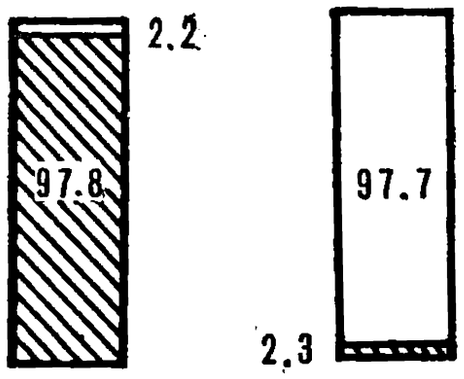
In the U.S.S.R. the system of public ownership of the instruments and means of production dominates in all the sectors of the economy. The fruits of the working people's efforts are placed at the disposal of society. The country's vast wealth belongs to the people. That is the main distinguishing feature of socialist society.

The economic foundation of the U.S.S.R. is the socialist system of economy and the socialist ownership of the instruments and means of production. The law permits the small private economy of handicraftsmen and individual peasants, but forbids them to exploit the labour of others.

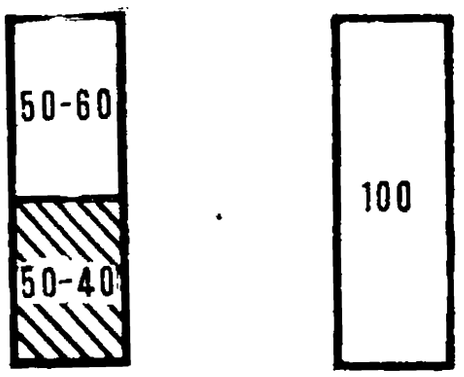
The abolition of the system of private ownership of the means of production put an end to the very possibility of man being exploited by man. In the U.S.S.R. the producers of material values work for society, i.e.,



Gross Industrial Production
(in per cent)



Gross Agricultural Production
(in per cent)



Commodity Circulation
(in per cent)

socialist sector

private sector

Changes in the Soviet economy as a result of socialist victory

for themselves, and not for capitalists. That is why every Soviet worker is vitally interested in the growth of socialist production, in the enhancement of the country's economic might.

Competition, the drive for profits and anarchy of production are totally alien to socialist society. The whole of the national economy develops along absolutely new lines, according to plan. That has made it possible to eliminate crises, unemployment and poverty. The well-being of the working people in town and countryside is constantly improving.

Socialization of the means of production has wrought radical changes in the distribution of the national income. It is now being distributed among the entire people and not just certain groups. Nearly three-quarters of the nation-

al income goes to satisfy the personal material and cultural needs of the Soviet people. The remainder is used for expansion of socialist production and other public needs. The nation's income in 1955 was almost 17 times that of 1913, and continues to increase.

One of the basic forms of socialist property is that of *state property* (belonging to the entire people). According to the Constitution, state property includes the land, its mineral resources, waters, forests, mills, factories, mines, rail, water and air transport, banks, communications, large state-organized agricultural enterprises (state farms, machine and tractor stations), as well as municipal enterprises and the bulk of the dwelling-houses in the cities.

State socialist property came into being with the establishment of the Soviet state. In the beginning it comprised the land and the large mills, factories and banks which had belonged to landlords and capitalists and which the Soviet Government had nationalized. Today, it consists overwhelmingly of the enterprises created by the people since the First Five-Year Plan. Constituting nine-tenths of all the productive facilities of the U.S.S.R., state property plays a dominant role in the national economy.

Another form of socialist property is that of *co-operative and collective-farm property*. It is the property of collective farms and co-operative societies (common buildings, livestock, implements, and products).

The difference between the two forms lies in the fact that state property belongs to the whole people and co-operative and collective-farm property to individual collectives. In other words, it is group property.

Thus, state property is administered by state-appointed people, and co-operative property by members of the co-operative itself or by people it appoints. The output of a state enterprise is not distributed among its workers, but goes into the state fund. The produce of a co-operative is disposed of at the discretion of its members.

But despite these differences, state and collective enterprises are essentially alike and founded on the same principles: the means of production are public property, people work collectively, there is no exploitation of man by man, the work is done according to plan. The principle "to each according to his work" is applied in both cases.

How is work organized in a state enterprise? Let us take a factory. It is headed by a state-appointed manager who directs the economic activity of the plant and is responsible for its condition and the fulfilment of its plan.

The workers and employees of the enterprise and their trade-union organization take an active part in organizing production and help the administration to eliminate shortcomings. They are vitally interested in the smooth operation of their factory and fulfilment of the state plan. The manager relies on the experience and knowledge of the workers, on their creative initiative. A particularly big part is played by production conferences.

Collective contracts are an important means of enlisting the assistance of workers and employees in the administration of the enterprise. These contracts envisage mutual obligations. The workers pledge to raise productivity and improve quality, while the administration promises to better working and housing conditions.

The draft collective contracts are discussed at general meetings.

The workers get their wages from the state.

Things are different in co-operatives. The collective farm, for example, is managed, and its produce is disposed of, by the collective farmers. The main organizational and administrative issues are covered by the Rules of the Agricultural Artel which the farmers themselves approve. The main organ of authority of a collective farm is the general meeting of its members. They elect the board and its chairman. The board reports periodically to the collective farmers on its work. Collective farmers are paid for their work in kind and money out of the income of their farm.

There is *personal property*, too. It consists of the Soviet citizens' incomes and savings from work, dwelling-houses and outhouses, articles of domestic economy and of personal use and convenience. Collective farmers and many workers and employees own livestock and poultry.

By its nature, personal property in the Soviet Union is fundamentally different from the private property in capitalist countries. The Soviet law precludes personal property from being turned into a weapon of exploitation, into an instrument for receiving unearned income. For instance, no Soviet citizen is allowed to have two dwelling-houses with the exception when one of them is used temporarily, i.e., when one of them is a country cottage.

The source of personal property is the work of the Soviet citizens in mills, factories, mines, collective farms, etc., their participation in socialist production, and as such it is protected by law.

The Soviet law permits the small private economy of individual peasants and handicraftsmen and there is,

therefore, *private ownership* of instruments and means of production. Exploitation of the labour of others, however, is prohibited by law. Individual peasants, handicraftsmen and the members of their families totalled about 1,000,000 at the beginning of 1956.

Planned Economy. The socialist economic system is distinguished by its planned character. The economic life of the U.S.S.R. is built on scientific foundations and directed by the state plan. This plan is necessary because in a country ruled by the people the economy is an integrated whole and all its branches are closely interconnected. Without a general plan there can be no proper, co-ordinated and uninterrupted development of the socialist economy.

The planning of the Soviet national economy is possible because the basic instruments and means of production are in the hands of the state.

Planning permits the socialist state to develop its economy in conformity with the needs of the country, to avoid disproportion, to ensure the necessary co-ordination of the various branches of production. Planning makes for correct distribution of the country's productive forces, for the fullest and most rational utilization of its material and labour resources.

Planning is in the hands of the State Planning Committee of the U.S.S.R. Council of Ministers and the all-Union industrial ministries. National-economic development plans are worked out for one year, five years and longer periods.

While providing for the continued growth of socialist production, the state plan creates the conditions necessary for raising the living standard of the working people, increasing their wages, multiplying the number of

dwelling-houses, schools, libraries, clubs, hospitals, sanatoriums, children's homes, etc.

It is, therefore, only natural that the workers, collective farmers and specialists do everything to fulfil and overfulfil economic plans, that they bring out and make use of all latent productive reserves.

It has become traditional with Soviet working people to achieve state five-year plans ahead of schedule on all important indices. The Fifth Five-Year Plan, for instance, was fulfilled in four years and four months. Industrial production was more than treble that of 1940, and real wages almost double those of pre-war. At present, Soviet people are successfully carrying out the Sixth Five-Year Plan.

The state budget is a component part of the national-economic plan. Distribution of the revenues and expenditures among the budgets of the U.S.S.R. and Union republics is done with due consideration of the peculiarities and requirements of various republics (and in their budgets, of those of their autonomous republics, regions and areas).

One distinguishing feature of the Soviet state budget is that it knows no deficit, its revenue always exceeds expenditure.

Another is that the greater part of the revenue comes from socialist enterprises and organizations in the form of turnover taxes and deductions from profits. Personal income tax constitutes a very small part of the budget. In 1957, it will amount to 51,500 million rubles, or 8.4 per cent of the revenue.

The debit side of the Soviet budget is signally expressive of the way expenditures are distributed. The main

part of the money goes for financing the national economy—244,658 million rubles of the 604,580 million in the 1957 budget. Social and cultural needs take up another 188,398 million rubles. Military expenses, which are constantly decreasing, constitute one-sixth of the budget. In recent years the Soviet Union has reduced its armed forces by almost 2,000,000 men and thus convincingly demonstrated that it strives for peaceful co-existence with all other countries.

Labour in the U.S.S.R. Socialism has freed labour from exploitation. Under socialism, man's labour is the only source of his income. No one can pass on his share in the social effort to another. The Constitution of the U.S.S.R. says that work is a duty and a matter of honour for every able-bodied citizen. The success of socialist construction and their own material welfare depend on the results of the work done by workers and peasants.

Every Soviet citizen enjoys the opportunity to develop and creatively apply his physical and spiritual abilities and talents to his work. The Soviet Government organizes labour activity in a planned way and on a nation-wide scale.

Soviet citizens have the right not only to work, but also to receive payment in conformity with the socialist principle—according to quantity and quality.

The wage system in the Soviet Union is so organized that it makes every worker take a material interest in the results of his labours. The more and the better one works, the more one receives. This makes for higher productivity and improves quality.

The Soviet working people, being masters of their own country, want every enterprise and state and collec-

tive farm to achieve better results. This is expressed in mass socialist emulation, in the comradely co-operation in the struggle for economic development. Emulation has become a nation-wide movement, embracing all the branches of the economy. Taking part in it are individual workers, factory shops, collective-farm teams, whole enterprises and even whole branches of industry, cities, territories and republics.

Emulation stimulates creativeness, gives scope to innovators and brings out new reserves. In the fifth five-year plan period (1951-55), the Likhachov Motor Works in Moscow saved 166,500,000 rubles through the introduction of some 30,000 proposals for technical improvements and rationalization.

Front-rank workers and collective farmers share their experience with others and by their high productivity set an example to those who lag behind.

The Soviet state encourages successful workers by awarding them bonuses, medals and titles. There is a number of government awards: the medals "For Labour Valour" and "For Labour Distinction," the Order of the Red Banner of Labour and the title of Hero of Socialist Labour.

THE SOVIET STATE STRUCTURE

Union of Free Nations. The Great October Revolution put an end to the tsarist regime of national oppression and brought the peoples of Russia freedom, independence and equality. The Communist Party held that the national question could be solved through a voluntary union of nations which would preclude all violence by one nation against another and would be founded on confidence,

fraternal unity and concord. The path to such a union was paved by the victory of the October Revolution.

The Declaration of the Rights of the Peoples of Russia, adopted by the Council of People's Commissars in November 1917, proclaimed the equality and sovereignty of the peoples of Russia, their right to self-determination (and to secession and establishment of independent states). It also annulled all national and religious privileges and restrictions.

The Russian Soviet Federative Socialist Republic (R.S.F.S.R.) was the first Soviet republic in the world. According to the 1918 Constitution, it was constituted on the basis of the voluntary union of free nations as a federation of national republics. In its wake and patterned after it, there came into being on the territory of the former Russian Empire the Ukrainian, Byelorussian, Azerbaijan, Armenian, Georgian and other republics.

The vital interests of the Soviet peoples, their common revolutionary aims, life itself demanded their union.

The Soviet republics set out on rehabilitating their economies. The economic dislocation in the country made this a difficult task. Separately, on its own, none of the Soviet republics could have accomplished it. It should be noted, too, that the young republics had similar political and economic systems, and maintained close economic ties with one another. Moreover, unification alone could secure the republics against attacks from without.

The initiative in the establishment of a single state came from the working class, from the working people of the republics themselves. V. I. Lenin proposed that the union of republics be voluntary, based on the principles of full equality and fraternal concord.

On December 30, 1922, the Russian Federation, the Transcaucasian Federation (uniting the Azerbaijan, Armenian and Georgian republics), the Ukrainian and Byelorussian republics signed an alliance treaty on the establishment of a single state—the Union of Soviet Socialist Republics. This was followed by the setting up of the U.S.S.R. Central Executive Committee.

The composition of the U.S.S.R. expanded along with the formation of new Soviet republics. In 1924, two Union republics—Uzbekistan and Turkmenia, whose peoples expressed the desire to join the Soviet Union—were formed on the territory of the Turkestan Autonomous Republic, which had been part of the Russian Federation, and of the Bukhara and Khoresm Soviet Socialist Republics. Tajikistan, thereto an autonomous republic within the Uzbek S.S.R., became a Union republic in 1929. Kazakhstan and Kirghizia, autonomous republics in the Russian Federation, were reorganized into Union republics in 1936. Next as equal Union republics came Armenia, Azerbaijan and Georgia. At the time the present Constitution was promulgated there were eleven republics in the U.S.S.R. The Moldavian S.S.R. was formed in 1940. That same year the working people of Latvia, Lithuania and Estonia overthrew the bourgeois rule and set up Soviet socialist republics which voluntarily joined the U.S.S.R.

At present the Union of Soviet Socialist Republics consists of fifteen republics:

the Russian Soviet Federative Socialist Republic,
the Ukrainian Soviet Socialist Republic,
the Byelorussian Soviet Socialist Republic,
the Uzbek Soviet Socialist Republic,
the Kazakh Soviet Socialist Republic,

the Georgian Soviet Socialist Republic,
the Azerbaijan Soviet Socialist Republic,
the Lithuanian Soviet Socialist Republic,
the Moldavian Soviet Socialist Republic,
the Latvian Soviet Socialist Republic,
the Kirghiz Soviet Socialist Republic,
the Tajik Soviet Socialist Republic,
the Armenian Soviet Socialist Republic,
the Turkmen Soviet Socialist Republic, and
the Estonian Soviet Socialist Republic.

The U.S.S.R. is a family of equal nations living in friendship and co-operating with one another.

As the multi-national Soviet state developed, the Communist Party, following Lenin's national policy, created the prerequisites for the political, economic and cultural advancement of all the peoples of the country, the backward ones in the first place. Genuine equality was achieved through the establishment of national organs of power and cultural institutions, through the training of national cadres. National economies were reorganized along new, socialist lines. Industries in the national areas developed exceptionally fast. Gross industrial production in the whole of the country in 1955 was 27 i mes that in 1913, while in Armenia it had increased 41 times and in Kirghizia 37 times over. The Russian people, with its well-developed culture, its numerous proletariat steeled by revolution, its scientists and technicians, helped the other nations, and it was this fraternal assistance that enabled them to achieve economic and cultural prosperity.

The friendship of the peoples of the Soviet Union grew strong in the course of socialist construction. It was especially manifest during the difficult war years 1941-45,

The friendship of the Soviet peoples, their mutual assistance were the force without which it would have been impossible to vanquish fascism or successfully rehabilitate and develop the country's economy.

The U.S.S.R. as a whole and each of the Union republics are sovereign states. According to the Constitution, the jurisdiction of the Union of Soviet Socialist Republics embraces cardinal political, economic and cultural issues—international relations, war and peace, organization of the armed forces, safeguarding the security of the state, determination of the national-economic plan, approval of the budget, direction of the monetary and credit system, admission of new republics, etc. Issues in which the peculiarities of the Union republics are especially manifest remain under their jurisdiction.

The Constitution establishes uniform Union citizenship for all citizens of the U.S.S.R. Every citizen of a Union republic is at the same time a citizen of the U.S.S.R.

Expressing the will of its peoples, the Soviet Union has consistently pursued a peaceful policy, a policy that follows logically from the very essence of the Soviet system.

In the U.S.S.R. there are no exploiting classes that are interested in war, annexation of territories and conquest of nations.

The Soviet Union is an enemy of national and racial oppression; it respects the rights and independence of other nations, big and small.

The Soviet people are engaged in a gigantic peaceful construction endeavour and for that reason they are vitally interested in promoting peaceful economic and cultural relations with all nations, in enhancing

all-round friendly contact with other countries, irrespective of their social system.

Lastly, according to the Soviet law, aggressive war is one of the gravest crimes against mankind.

Union Republics. All the Soviet republics are equal. In the U.S.S.R. there is no dominant nation and neither are there subject or oppressed nations as was the case in the Russian Empire. Each Soviet republic, irrespective of its size and population, enjoys equal rights with the others. State authority in the Union republics is exercised by their peoples through the freely elected soviets which are complete masters on their territory.

The sovereignty of the Union republics is limited only in the spheres in which they voluntarily surrendered jurisdiction when joining the Soviet Union. Outside these spheres each Union republic exercises state authority independently.

It has its own Constitution, its own supreme organ of state power, its own coat-of-arms and flag; it endorses its own state plan and budget, and promulgates its own laws. The territory of a Union republic cannot be altered without its consent. Each republic solves by itself questions of administrative-territorial and economic structure (formation and abolition of territories, regions, areas, districts, etc.). The business and correspondence of its state organs and institutions is conducted in the national language.

The right to secede from the U.S.S.R. is reserved by every Union republic. It has the right to enter into direct relations with foreign states and to conclude agreements and exchange diplomatic and consular representatives with them. Like the U.S.S.R. as a whole, the Ukrainian and Byelorussian republics are members of the United Nations Organization.

All the Union republics have one and the same economic foundation—the socialist system of economy and socialist ownership. All of them have developed industry and agriculture. But the economy of each has its own particular traits and peculiarities. Consequently, as the Union republic develops and its national cadres grow in number, its rights and powers expand.

On May 10, 1957, the VIIth Session of the Supreme Soviet adopted the Law "On the Further Improvement of Management in Industry and Construction." This law envisages a change to the geographical principle of management in industry and construction through local economic councils upon the basis of economic administration areas. The latter are to be set up by the Councils of Ministers of the Union republics, to which they will be subordinated. This permits all-round consideration of local potentialities and resources in each republic and at the same time enhances the productive forces throughout the Soviet Union.

All this promotes national-economic development in the Union republics, consolidates their sovereignty and strengthens mutual confidence.

Autonomous National-State Formations. Apart from the main nationality in a Union republic, there are other peoples or national groups living compactly on its territory and enjoying autonomy in one or another form.

Soviet autonomy presupposes organization of local organs of state power, courts, schools, socio-political and educational institutions and the use of the national language of the peoples or groups inhabiting the area concerned in all spheres of public life.

The highest form of autonomy is the autonomous republic. It has its own Constitution, which is drawn up in

conformity with the Constitution of the Union republic and takes account of the specific features of the autonomous republic. The autonomous republic exercises wide jurisdiction in all the spheres of life. The people that has founded it enjoys on its territory the right to self-government.

In the Russian Federation there are the Bashkirian, Buryat-Mongolian, Daghestan, Kabardino-Balkar, Karelian, Komi, Mari, Mordovian, North Ossetian, Tatar, Udmurt, Checheno-Ingush, Chuvash and Yakut autonomous Soviet socialist republics; in Georgia—the Abkhazian and Ajarian autonomous Soviet socialist republics; in Azerbaijan—the Nakhichevan Autonomous Soviet Socialist Republic; and in Uzbekistan—the Kara-Kalpak Autonomous Soviet Socialist Republic.

The Yakut Autonomous Soviet Socialist Republic, established in 1922, is a vivid example of how much the economy has developed and the living standard of the working people improved in the autonomous republics.

Yakutia spreads over a vast territory in northeast Asia. High snow-covered mountains, the tundra, the dense, inaccessible taiga pierced by mighty rivers—such is the landscape in this grim, cold land. Under tsarism, Yakutia was a backwoods country inhabited by Yakuts, Evenks and other oppressed tribes that were gradually dying out. It was there that political convicts were sent to do hard labour. Yakutia had no industry of her own. Only two per cent of the local population was literate.

Delivered by Soviet power from exploitation and national oppression, the Yakut people set out to build a new, free life, to develop their vast country, so rich in gold, furs, coal and salt.

Yakutia now has numerous modern gold mines. Her

coal, timber, shipbuilding and fishing industries are fast expanding, and a beginning has been made in diamond-mining. The small, cold mud *yurtas*, with windows of ice instead of glass, have given way to bright, spacious and warm houses.

Soviet power has given the Yakuts their own written language. The republic has more than 600 schools, thousands of cultural institutions, several establishments of higher education. More than 1,200 young men and women are studying at the Yakut University. Opened in October 1956, it is the youngest in the country.

Another form of autonomy is the autonomous region. It has no constitution of its own, but its rights are safeguarded by the Constitution of the Union republic. There are ten autonomous regions in the Soviet Union: the Adygei, Gorny-Altai, Jewish, Kalmyk, Tuva, Khakass, Cherkess (R.S.F.S.R.), South Ossetian (Georgia), Nagorny Karabakh (Azerbaijan), and Gorny Badakhshan (Tajikistan).

When autonomous regions achieve the political and economic level of the autonomous republics, they are raised to the status of republic. Such was the case with the Mari and Komi regions.

The third form of Soviet autonomy is the national area. There are ten of them, all in the Russian Federation, mainly in the North.

Like other autonomous units, national areas have their own Soviets of Working People's Deputies.

These districts were extremely backward before the October Revolution. Their life has changed completely since then; they have been granted self-government, there are towns where there were none before, and national specialists.

Let us take, for example, the population of the Komi-Permyak National Area. Like other small nationalitie of the North, it was poverty-ridden and uncultured in the past. Today, this regenerated people has a fast developing industry and agriculture.

The Komi-Permyaks now have their own written language, elementary and secondary schools, teachers' and pedagogical schools, agricultural and forestry schools, a medical school, a national theatre and cinemas. There is a national intelligentsia—engineers, teachers, physicians, art workers.

Similar success has been achieved by the other formerly backward peoples of the country.

The state structure of the U.S.S.R. is reflective of its multi-national composition. Administratively, the whole of the country is divided, within the boundaries of the Union republics, into territories, regions and districts.

Organs of Power. The highest organ of state power in the Soviet Union is the Supreme Soviet of the U.S.S.R., elected for a term of four years and representative of the entire Soviet people. The Constitution vests the Supreme Soviet with extensive powers and rights to solve all questions coming under the jurisdiction of the Union.

The Supreme Soviet is the sole legislative organ in the country. It appoints the Government, elects the Supreme Court and nominates the Procurator-General. All of them are accountable to the Supreme Soviet. It has the right to control the activity of any state organ. All that shows that it exercises plenipotentiary powers.

The Supreme Soviet consists of two chambers: the Soviet of the Union and the Soviet of Nationalities. This is explained by the multi-national character of the state.

The common interests of all the Soviet citizens, irrespective of their nationality, are represented in the highest organ of state power by the deputies of the Soviet of the Union.

There are dozens of nationalities in the U.S.S.R. and their specific interests, arising from the peculiarities of the economy, culture and life of each separate nationality, are looked after by the second chamber, the Soviet of Nationalities.

The two chambers differ both in the procedure of election and the proportion of representation. One deputy for every 300,000 of the population is elected to the Soviet of the Union. The Soviet of Nationalities, on the other hand, is elected on the basis of 25 deputies from each Union republic, 11 deputies from each autonomous republic, five from each autonomous region and one from each national area (irrespective of the size of their population).

The two chambers of the Supreme Soviet have equal rights and equal powers to initiate legislation. A law is considered adopted if passed by both chambers by a simple majority vote in each.

Ordinary sessions of the Supreme Soviet are convened twice a year. Extraordinary sessions are convened at the discretion of the Presidium of the Supreme Soviet or on the demand of one of the Union republics. In all cases they are convoked by the Presidium of the Supreme Soviet. The sessions of the Soviet of the Union and of the Soviet of Nationalities begin and terminate simultaneously.

The chambers have their own auxiliary organs—the legislative proposals, budgets, credentials and foreign affairs standing committees. In February 1957, the

Soviet of Nationalities decided to set up an economic committee with a view to improving national-economic planning, solving economic and cultural questions in the various republics and dealing comprehensively with their requirements.

The Supreme Soviet actively defends peace. In its declaration of February 9, 1955, the Supreme Soviet pointed out that the responsibility for safeguarding world peace lay with the parliaments and stressed that the establishment of direct contacts among parliaments, exchange of parliamentary delegations and addresses by delegates in other countries' parliaments would make for greater mutual understanding and co-operation. Twenty-eight foreign parliamentary delegations visited the U.S.S.R. in 1955 and 1956 on the invitation of the Supreme Soviet, while its own delegations went to sixteen countries in Europe and Asia.

Striving to promote direct contact among parliaments, U.S.S.R. Supreme Soviet deputies formed a National Parliamentary Group which joined the Inter-Parliamentary Union.

In the intervals between sessions of the Supreme Soviet problems connected with the government of the country are dealt with by the Presidium, which is elected at a joint sitting of the two chambers and consists of the President, fifteen Vice-Presidents (one from each Union republic), fifteen Members and one Secretary. The President of the Presidium now is K. Y. Voroshilov.

In the Union and autonomous republics the highest organ of state power is the Supreme Soviet, consisting of one chamber and elected for a term of four years. Representation, determined by the republican Constitution, depends on the size of the population. In the

R.S.F.S.R., for instance, one deputy is elected for every 150,000 of the population, in the Ukrainian S.S.R.—one for every 100,000, in the Kirghiz S.S.R.—one for every 5,000. In the Nakhichevan Autonomous Soviet Socialist Republic it is one for every 2,000.

The powers of the Supreme Soviet of a Union republic and its Presidium are clearly defined by the republican Constitution. The Supreme Soviet elects its Presidium, the President of the Presidium, appoints the Council of Ministers and elects the Supreme Court, all of which are accountable to the Supreme Soviet.

The autonomous republics, forming part of the Union republics, are represented on the latter's Supreme Soviets by the Vice-Presidents of the Presidium (thus, the President of the Presidium of the Supreme Soviet of the R.S.F.S.R. has fourteen deputies).

In territories, regions, autonomous regions, districts, cities and rural localities state power is exercised by the local Soviets of Working People's Deputies,* which are elected for a term of two years. They implement the laws and decrees of the central state organs and direct local economic and cultural affairs.

As organs of power of the workers and peasants, they maintain constant contact with millions of Soviet people and look after their needs and requirements.

Soviet representative organs meet periodically and because of that their activity does not interfere with the deputies' regular jobs. The intervals between sessions differ in length. In the rural localities, for instance, the soviets as a rule meet not less than once a month,

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* There are altogether about 60,000 local soviets in the country.

while the Supreme Soviets of the Union republics meet twice a year.

In the intervals between sessions, the affairs are in the hands of an executive committee, elected by the soviet and accountable to it. Like the soviets, the executive committees enlist the assistance of workers, collective farmers and office employees.

The decisions of the local soviets are binding on all the state and public organizations operating on their territory.

How are the soviets elected? According to the Constitution of the U.S.S.R., the deputies are chosen by the electors on the basis of universal, equal and direct suffrage by secret ballot.

Elections of the organs of state power are universal: all citizens who have reached the age of eighteen, irrespective of race or nationality, sex, religion, education, domicile, social origin or property status, have the right to vote, with the exception of insane persons and those who have been deprived of electoral rights by a court of law. There are no other restrictions or qualifications.

Every citizen who has reached the age of twenty-three is eligible for election to the Supreme Soviet of the U.S.S.R. In the case of the Supreme Soviets of the Union and autonomous republics it is twenty-one, while in that of the local soviets it is eighteen.

Equal electoral rights mean that every elector — minister or worker, scientist or collective farmer, serviceman or art worker — has one vote and participates in elections on an equal footing with other citizens. No candidate can be nominated by more than one election district.

Elections of deputies are direct: all the soviets are elected by direct vote. This permits constant contact between the elector and the deputy and control by the masses of the activities of their representatives.

Voting at elections to the soviets is secret. This precludes the possibility of any pressure being exerted on the elector and gives him full opportunity to reject the candidates nominated.

Soviet people take an active part in the elections to the organs of power — 99.9 per cent turned out for the elections to the local soviets in 1957.

The idea of setting up a Communist and non-Party election block was born in 1937, at the time preparations were in progress for the first elections in conformity with the new Constitution. The community of political and economic interests of all the working people in the Soviet Union — Communists and non-Party people—permits Party and non-Party organizations to draw up single lists of candidates. This played a very important part in consolidating the unity of the people.

The candidates of the Communist and non-Party bloc are invariably returned by an overwhelming majority. In the 1955 elections to the Georgian Supreme Soviet only 778 electors out of 2,367,480 voted against the bloc, while in Latvia the figures were 910 and 1,438,167 respectively.

The right to nominate candidates is secured to public organizations, Communist Party organizations, trade unions, factories, mills, institutions, educational institutes, collective and state farms, and the armed forces. Thus, the candidates are named by the people themselves.

The whole election campaign—compilation of election lists, pre-election agitation and the elections them-

selves—is controlled by the masses through election committees composed of representatives of public organizations.

The Soviet electoral system is distinguished by the fact that every deputy has to report on his work to his electors. That permits systematic participation of the masses in the work of the soviets. For instance, in the Byelorussian S.S.R. there were over 52,000 meetings between deputies and their electors in 1955. They were attended by more than 2,500,000 men and women, many of whom discussed the reports.

Organs of State Administration. The highest executive and administrative organ of state power is the Government, namely, the Council of Ministers of the U.S.S.R. It is formed by and is responsible and accountable to the Supreme Soviet (in the intervals between sessions of the Supreme Soviet to its Presidium). This means, among other things, that the Government (or a Minister) to whom a question of a deputy of the Supreme Soviet is addressed must give a verbal or written reply in the respective chamber within a period not exceeding three days.

The Council of Ministers of the U.S.S.R. consists of the Chairman and his deputies, ministers, chairmen of the various committees, and the Chairman of the Board of the State Bank.

The Council of Ministers of the U.S.S.R. co-ordinates and directs the work of the ministries, guides the economic councils through the Councils of Ministers of the Union republics, adopts measures to carry out the national-economic plan and the state budget, and to strengthen the credit and monetary system, adopts measures for the maintenance of public order and for the protection of

the interests of the state and citizens, exercises general guidance in the sphere of relations with foreign states, and directs the general organization of the armed forces. It has the right to suspend decisions and orders of the Councils of Ministers of the Union republics and the economic councils and repeal the orders of the U.S.S.R. ministers on questions which come within the jurisdiction of the Soviet Union.

In recent years the U.S.S.R. has taken a series of important measures to improve economic management. The Party and Government are searching for more flexible forms of administration which would take account of the peculiarities inherent in the present stage of development. In this respect, the Law "On the Further Improvement of Management in Industry and Construction," of May 10, 1957, is of exceptional importance.

Now, when the country boasts of highly developed industry and construction and when there are more than 200,000 state industrial enterprises and over 100,000 construction sites in various republics and areas throughout the width and length of our vast country, it is practically impossible for several ministries and departments to direct a large number of enterprises or construction sites concretely and effectively.

It is in the interests of national-economic development, it says in the law, further to perfect the organizational forms of management in all the branches of industry and construction. The organizational structure of management in industry and construction must be based on a combination of centralized state leadership and the enhanced role of republican and local bodies through which the broad working masses take a more active part in government. The centre of gravity of man-

agement in industry and construction is to be transferred to localities. With this in view, the law envisages a change from management through the various industrial ministries to the geographical principle of management by economic areas. The economic councils, subordinated to the Councils of Ministers of the Union republics, are to be the basic organizational form of management.

The Government of the U.S.S.R. and the Governments of the Union republics, being the organs of state power of the working people in town and countryside, are genuinely democratic. Here is what Pandit Sunderlal, a member of the Indian National Congress, said of the Soviet Government in a speech he made in Delhi in 1954: "If there is any country in the world where the government is run for the people and by the people it is the U.S.S.R. Every Russian, every worker and every peasant considers the Soviet Government his own."

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The Courts and the Procurator's Office. The Soviet court stands guard over the social and state system of the U.S.S.R. and looks after socialist legality and the rights of citizens as guaranteed by the Constitution. Justice is administered by the Supreme Court of the U.S.S.R., the Supreme Courts of the Union and autonomous republics, the courts of the regions (territories), autonomous regions and areas, the district and the people's courts, as well as by military tribunals that deal with servicemen's crimes.

Serving the interests of the people, the Soviet court not only punishes law-breakers, but helps to educate them.

The Soviet court is independent and subject only to the law. The judges are not appointed by any organ of power but elected by the soviets or the citizens themselves. People's courts, which try the overwhelming majority of criminal and civil cases, are elected on the basis of universal, direct and equal suffrage by secret ballot for a term of three years. The candidatures of people's judges and assessors are nominated by the citizens at their meetings.

All the U.S.S.R. citizens are equal before the court, irrespective of their nationality, religion and social status. Proceedings are conducted in public, in the language of the Union or autonomous republic, persons not knowing this language being guaranteed the opportunity of acquainting themselves with the documents through an interpreter and likewise the right to use their own language.

The judges and people's assessors enjoy equal rights in trying cases. Decisions in civil cases and verdicts in criminal cases are adopted by a majority vote.

The power to ensure observance of the socialist law is vested in the Procurator's Office, which is independent of any local organs whatsoever. It is headed by the Procurator-General, who is appointed by the Supreme Soviet of the U.S.S.R. for a term of seven years.

The duty of the Procurator's Office is to see that the Soviet laws are properly and strictly observed by all the state institutions, officials and citizens of the U.S.S.R.

DEMOCRATIC RIGHTS AND FREEDOMS OF SOVIET CITIZENS

Socialism is not merely progressive, planned economy or material achievements, though for the people they are a decisive factor. The socialist system accords the working people the broadest social and political rights—the right to work, the right to rest and leisure, the right to education, the right to maintenance in old age.

All these rights are secured by the Constitution of the U.S.S.R. The Soviet state has created all the conditions necessary for the practical exercise of these rights.

The rights specified in the Constitution apply equally to all the citizens of the U.S.S.R., irrespective of social origin and status, nationality and race. Illegal restriction of these rights, establishment of any privileges on account of race or nationality, advocacy of national or racial enmity are considered a crime.

These are not just empty words. That was the conclusion also arrived at by the 19 Americans who visited the Soviet Union in 1950 and later described their impressions in a pamphlet called *We Saw for Ourselves*. The authors were people of different standing, of different views and political affiliations. Yet they were unanimous in stressing that the citizens of the U.S.S.R., irrespective of their nationality and race, were equal before the law and enjoyed equal rights as guaranteed by the Constitution. All the Soviet citizens, they wrote, take part in the elections, and are entitled to hold political posts, all of them can live in any hotel they wish, eat in any

restaurant and travel by any railway carriage. "It was," they concluded, "like being in another world."

Let us dwell on the basic rights of the Soviet people.

Citizens of the U.S.S.R. have the right to work, i.e., the right to guaranteed employment and payment for their work in accordance with its quantity and quality. In the Soviet Land, where the national economy develops according to plan and where there are no crises or unemployment, there is work for every man.

Payment for work depends on the form of socialist ownership prevailing at his place of work. For instance, in enterprises it is guaranteed by the state. In co-operative societies it is made out of their funds. But whatever the form of payment, it in no way depends on such things as sex, age or nationality. Real wages in the Soviet Union are constantly growing.

The Soviet Government pays particular attention to making labour healthy, to creating the best possible working conditions. Diverse labour protection and safety measures are taken on a nation-wide scale and everything is being done to prevent occupational diseases.

Citizens of the U.S.S.R. have the right to rest and leisure. This is ensured by the establishment of an eight-hour day for industrial and office workers (they work six hours on the eve of holidays and rest-days), reduction of the working day to six hours or even to four hours in the case of arduous trades. In the case of young workers (from 16 to 18 years of age) it is restricted to six hours. In the course of the sixth five-year plan period industrial and office workers will gradually go over to a seven-hour working day without any reduction in wages.

All the workers and office employees have annual vacations (not less than a fortnight) with full pay. They

have numerous holiday homes, clubs, theatres, reading-rooms and stadiums at their disposal. More than half of those resting in sanatoriums or holiday homes are sent there free of charge or on easy terms at the expense of state social insurance.

One of the greatest achievements of the Soviet people is the right to maintenance in old age and in case of sickness or temporary disability. Social insurance on which this is based was introduced immediately after the October Revolution. Industrial and office workers get their pensions out of state funds, and collective farmers out of their artel's special fund.

A new law was promulgated in 1956, sharply increasing most of the pensions.

The draft pension law was discussed at public meetings and was unanimously approved. Here is an excerpt from one of the many thousands of letters written to the newspapers after the publication of the draft. "I am 61," wrote S. Janelavičus, a Lithuanian worker from Šiauliai. "I fought for Soviet power in Lithuania during the Civil War. It is gratifying indeed to see the achievement of the aims for which we had struggled.... Under bourgeoisie, you were thrown out when you grew old and nobody cared about you. Today, every worker is materially secure in his old age."

The right to maintenance in case of disability is ensured by free medical service for every citizen. Hospital fees do not exceed six rubles a day. Low-wage working people pay nothing.

Soviet people make wide use of the right to education. Fifty million people, i.e., one in every four, study in the Soviet Union. The country, it may be said, is one huge university.

The right to education is best ensured by the introduction since the war of compulsory seven-year education throughout the land. Secondary education (ten years), now obligatory in all the bigger towns, will be made compulsory on a nation-wide scale within the next few years.

Prior to 1956, tuition was free only in elementary and seven-year schools. Now tuition fees have been abolished in the eighth, ninth and tenth grades of the secondary school, in vocational schools and institutes of higher education. Students of higher and specialized secondary educational establishments get state stipends. The state pays all the expenses of the pupils of Labour Reserves schools.

The Constitution grants the citizens of the U.S.S.R. freedom of speech, press, assembly, meetings and demonstrations.

How are these rights ensured?

The freedom of the press is ensured by the state by placing at the disposal of the working people and their organizations printing presses, stocks of paper, printing ink, etc. The press has developed tremendously in Soviet years. It is not only the press for the people; it is the press of the people. There are thousands of newspapers and magazines published in the country. The works of the founders of Marxism-Leninism, scientific books and fiction are put out in tremendous editions in 86 languages of the Soviet Union. Soviet working people also have the opportunity of reading originals and translations of foreign-language books.

The freedom of assembly, meetings and demonstrations is ensured by placing at the disposal of the working people

the necessary public buildings, streets and other material requisites.

The right to freedom of speech is exercised through discussion of important laws, at public assemblies and meetings, scientific discussions, debates on the reports submitted by deputies, etc.

Soviet power encourages the political activity of the multi-million masses. According to the Constitution, citizens have the right to unite in public organizations: trade unions, cultural and scientific societies, sports, defence and youth organizations.

The church in the U.S.S.R. is separated from the state, and the school from the church. All religions are permitted, but none is granted any privileges. A Soviet citizen can profess any religion, or none. Believers are not subjected to any restrictions. The law recognizes religious worship and allows organization of religious societies, which have churches and mosques at their disposal. At the same time the law permits scientific atheist propaganda, but no activity that may outrage the religious feelings of believers and clergymen.

Citizens of the Soviet Union are guaranteed inviolability of their person, home and privacy of correspondence. No person may be placed under arrest except by decision of a court or with the sanction of a procurator. An earnest of the genuineness of the above-mentioned rights is the fact that their violation is regarded as a crime that is dealt with resolutely by the state.

Woman's equality with man was recognized at the very inception of Soviet power. She was accorded an equal right with man to work, to payment for work, to rest and leisure, to education. Making use of these rights, women

of all nationalities work alongside men in industry, transport, collective farms, hospitals, schools and state institutions. They constitute 53 per cent of all the specialists with higher education, 76 per cent of all the physicians and 70 per cent of all the teachers. About 19,000 have academic ranks and degrees.

Women take an active part in state government: 348 are deputies to the U.S.S.R. Supreme Soviet, more than 2,000 to the Union republican Supreme Soviets and upwards of 500,000 to the local soviets.

Before the Revolution, Uzbek women were literally slaves and none would have dared come out unveiled. Those who have grown up in Soviet years find it difficult to believe that. In 1955, some 13,000 women were elected to the soviets in the Uzbek S.S.R. Of the 300 deputies to the Tajik Supreme Soviet, 99 are women.

The possibility of really exercising equal rights is ensured, among other things, by the considerable state aid to mothers of large families and unmarried mothers. Moreover, there is a wide network of kindergartens, nurseries and health-building summer camps. Special laws protect the interests of mother and child. Women working in industries and institutions are granted maternity leave with full pay.

But while guaranteeing citizens various rights and freedoms, the Soviet state imposes on them a series of important obligations, the main being specified by the Constitution.

It is the duty of every citizen to abide by the Constitution and to observe the laws. As a member of socialist society, he must work honestly, maintain labour discipline and respect the rules of socialist intercourse.

He must safeguard and fortify socialist property, which is the foundation of the Soviet system. And it is his sacred duty to defend the country.

* * *

Power in the U.S.S.R. belongs to the people, the one and only master of the country.

Carrying out the decisions of the Twentieth Congress of the C.P.S.U., which outlined the grand tasks of communist construction, the Party and the Government consistently promote Soviet democracy, striving to enhance the working people's creative activity and drawing them still more into administrating the state.

INDUSTRY

A FEW FACTS AND FIGURES

An illustration of this country's high level of industrial development is that in 1956 the hourly output included more than 4,000 tons of pig iron, 5,500 tons of steel, nearly 48,000 tons of coal and 628,000 metres of cotton fabrics.

The Soviet machine-building industry can produce any kind of appliance, machine-tool and machine in sufficient numbers to meet the country's requirements. Every year, Soviet designers bring out from 700 to 900 new types and makes of machines and equipment—giant turbogenerators and high-precision machine-tools, the latest foundry equipment and automatic devices, superbly equipped fishing vessels, diesel locomotives, powerful building machinery, precision instruments, electronic computing machines and nuclear reactors.

Soviet industry has turned out a first-class highly productive turbobore that is being successfully employed in this country's oilfields. In 1956, an American firm obtained permission to start the production of these turbobores in the U.S.A.

The Urals Machine-Building Works is making walking excavators with a bucket of 494 cubic feet. The aggregate capacity of the electric motors on this machine is 7,000 kilowatts. A minimum of 100 railway cars are needed to transport one of these excavators, which annually digs

and removes more than 176 million cubic feet of earth, doing the work of 7,000 navvies. The same works has produced an even more powerful excavator. Its 706 cubic foot bucket daily removes 230,000 cubic feet of earth. The long trunks of these mammoth machines tower above major construction projects throughout the country.

The TU-104 jet airliner, which carries 50 passengers and their luggage, is another achievement of Soviet industry. Powered by two huge jet engines, the aircraft cruises at a speed of 500 miles per hour.

Passengers travel in a comfortable, air-tight cabin where temperature is constant at 20°C. The TU-104 flies non-stop over distances of 1,800-2,000 miles at an altitude of 32,000 feet. All its parts are made of materials obtained in the Soviet Union and it has the latest kind of radar equipment as well as blind-flying and automatic piloting instruments, which make it independent of meteorological conditions.

The TU-104 is a fast turbo-jet airliner, which runs mostly on long-distance routes. Shorter routes will be served by turbo-prop aircraft.

The *Ukraina*, a powerful, four-engined turbo-prop aircraft, has been successfully tested. It cruises at a top speed of 375 miles per hour and carries 84 passengers and three and a half tons of cargo.

It is equipped with the latest aeronautical instruments which enable the aircraft to take off, fly and land under any meteorological conditions.

The maturity of Soviet industry and engineering is shown at the U.S.S.R. Industrial Exhibition, which began to function in 1956. In the twenty pavilions and many open demonstration grounds, there are nearly a thousand modern Soviet-made machines and machine-tools,

thousands of instruments and apparatuses, and numerous models and mock-ups. The major attractions are the Atom Pavilion and the Pavilion of Machine-Building.

In the halls devoted to power engineering, visitors can see a 426 ton runner for the turbines of the Kuibyshev Hydropower Station. Its diameter is 30 feet.

A model of a ПК-12 uniflow steam boiler acquaints visitors with yet another achievement of Soviet workers and engineers. The main specifications of the ПК-12 are: 300 tons of steam per hour; pressure—215 atmospheres; overheat temperature—575°C. The steam produced by this boiler will drive turbines at high speeds.

Shipbuilders exhibited a 900 h. p. marine engine, consisting of several vertically mounted paddle-wings that combine the functions of screw and rudder. This engine enables a vessel to perform any manoeuvre—move forward or backward, change speed, etc.—without changing the number of revolutions and the direction in which the shaft is revolving.

Among the numerous new machines on display at the exhibition there are a rolling mill for the spiral welding of big-diameter pipes from narrow sheets, a universal turning lathe with an electrohydrocopying device, technological equipment for the textile industry, radio relay communication apparatuses, the latest automobiles, refrigerators, TV sets and vacuum cleaners.

The Soviet Union has expanded its industry to such an extent that it is in a position to render technical assistance to many countries.

Hundreds of industrial enterprises and more than 90 separate shops and installations are being built in socialist countries with Soviet assistance.

For example, the U.S.S.R. is sending the Chinese People's Republic equipment for metallurgical and chemical works, power stations, machine-building plants and so forth. In April 1956, an agreement was signed under which the Soviet Union will help China to build 55 industrial enterprises in addition to the 156 projects already being constructed. These 211 big factories and plants will give China the basis on which to create her own heavy industry.

The Soviet Union is disinterestedly helping underdeveloped countries to promote their national economies.

In February 1955, the Soviet Union and India concluded an agreement on the building at Bhilai of an iron and steel works with an annual output capacity of a million tons of steel. Under the agreement, the Soviet Union will carry out all the designing work, and manufacture and deliver the necessary equipment; Soviet specialists will supervise the construction of the works, including the assembly and starting of the machinery. For all that, the U.S.S.R. will not have any portion of the capital invested in the works and will take no part in managing the enterprise.

Soviet economic ties with the West are also expanding. Many countries are importing Soviet machine-tools, machinery, automobiles and raw materials. The Soviet export list includes many items that the Americans in their policy of discrimination have designated as "strategic." Nearly 25 per cent of the Soviet export in 1957 consists of machines and equipment (in 1940, these items made up only five per cent of the export).

U.S.S.R. industry has tremendous export potentialities. The Soviet Union is trading with 65 countries.

Such is the might of Soviet industry today. This high

level was not reached at once. To ensure the country's rapid industrial development, Soviet people had to exert a truly heroic effort.

That is particularly striking against the picture of what Russian industry was at the beginning of the 20th century, before the outbreak of World War I.

FROM BACKWARDNESS TO PROGRESS

With the largest territory in the world and the third biggest population (after China and India), pre-revolutionary Russia was fifth in the world and fourth in Europe for the volume of industrial output. Heavy industry lagged far behind the light industry, which was also underdeveloped. That particularly concerned the machine-building industry. Many branches of industry such as machine-tool building, and the manufacture of automobiles and tractors were non-existent altogether. Geographically, industry was distributed very irrationally, being concentrated mainly in the central and southern regions of the European part of the country.

Russian industry had four times less modern equipment than Britain, five times less than Germany, and ten times less than the U.S.A. Economic and technical backwardness made tsarist Russia dependent on the developed capitalist powers. She was compelled to import a considerable part of her machines and equipment. Moreover, in the basic branches of the heavy industry, the key positions were held by foreign capitalists. All this greatly hindered industrial progress.

The October Revolution opened up new horizons and gave the country unprecedented opportunities for industrial growth.

After the bitter battles with the interventionists and Whiteguards, in which the Soviet people defended their freedom and socialist gains, the country embarked upon the rehabilitation of the national economy.

Those were difficult years. Fuel, metal and raw materials were in short supply. Most of the factories and plants were idle. The ore and coal mines were lying in ruins. Throughout the country there was an acute shortage of food-stuffs and clothes. Enemies did everything they could to hinder economic restoration. But the people who had won power and freedom had an inexhaustible store of creative energy. Doggedly, with their own hands and means, without any help from any quarter, they revitalized the country.

By 1926, industrial output was back at its pre-war level. But that was insufficient for a people that had taken the socialist path of development.

In order to make the country economically strong and independent it had to be transformed from an agrarian into an industrial power able to produce all the equipment it needed. That was the only thing that could advance all the other branches of the national economy and ensure a rise in the welfare of the people.

That was the goal of the policy of industrialization worked out by the Communist Party.

As the only socialist country in the world, the Soviet Union had to catch up with the industrial development of the chief capitalist powers as quickly as possible. Therefore, the people had to begin the country's industrialization with the building of a heavy industry. Dwelling on this point, J. V. Stalin said: "The Party remembered Lenin's words to the effect that without heavy industry it is impossible to uphold the independence of the

country, that without heavy industry the Soviet system may perish. The Communist Party of our country therefore rejected the 'ordinary' path of industrialization and commenced the industrialization of the country by developing heavy industry. This was a very difficult task, but one that could be accomplished."

Such a method of industrialization demanded tremendous capital investments.

Help from capitalist states could not be counted on: they refused to provide loans to the young Soviet Republic. The means for industrialization had to be found within the country. That task was also solved.

Soviet people utilized the wealth of opportunities inherent in the new system. In the U.S.S.R., the land, factories and plants, transport, banks, and foreign and domestic trade are in the hands of the state, in the hands of the people. The profits from industry, transport and trade were channeled into economic development. Freed from exploitation and from having to pay millions of rubles in rent to landlords, the peasantry helped the state build a heavy industry for that was in their vital interests as well.

By subscribing to state loans and by depositing their savings in savings banks, the working people also contributed towards the country's industrialization.

The socialist character of the economy made it possible to plan economic development on a big scale. In 1928, the Soviet people embarked upon the First Five-Year Plan of Development of the National Economy. Its chief aim was to supply industry and agriculture with modern machinery. Abroad, there were few believers in the feasibility of this plan. But the Soviet people started out on its fulfilment with enthusiasm.

Factories, plants and power stations began to rise all over the land. New enterprises were put into operation one after another. The country's appearance began to change. The foreign press had no alternative but to acknowledge that fact. "... The development achieved under the Five-Year Plan is astounding," wrote the English *Round Table*. "The tractor plants of Kharkov and Stalingrad, the Amo automobile factory in Moscow, the automobile plant in Nizhny Novgorod, the Dnieprostroi hydroelectric project, the mammoth steel plants at Magnitogorsk and Kuznetsk, the network of machine shops and chemical plants in the Urals ... these and other industrial achievements all over the country show that, whatever the shortcomings and difficulties, Russian industry, like a well-watered plant, keeps on gaining colour, size and strength.... She has laid the foundations for future development ... and has strengthened prodigiously her fighting capacity."

A traditionally agrarian country, the Soviet Union was fast becoming an industrial power. That was a great triumph of the people. The First Five-Year Plan largely owes its success to the birth in those years of socialist emulation which soon became a nation-wide movement.

The Second Five-Year Plan (1933-37), like the first, was carried out ahead of schedule. In the main, the technical reconstruction of the entire national economy was completed in those years.

Important progress was achieved in developing the light industry as well. Suffice it to say that in 1936, three factories alone—Skorokhod of Leningrad, Paris Commune of Moscow, and the Mikoyan Works of Rostov-on-Don—produced four times more footwear than all

the footwear factories of pre-revolutionary Russia put together.

On the whole, the large-scale industry expanded over eight times above the 1913 level. The new system received a dependable economic base. The socialist method of economy became dominant in the country. Capitalist private ownership was completely and for ever abolished.

In the course of two five-year plan periods, the Soviet Union outstripped the chief capitalist powers in the rate of industrial development. Now the task was to catch up and surpass them economically, that is, in per capita output. That was the goal of the Third Five-Year Plan, but the Nazi invasion in 1941 cut short this peaceful, constructive work.

The general results of the Soviet Union's industrialization during the years of the pre-war five-year plans were that over 9,000 major state enterprises were put in operation throughout the country. These included such giants as the Magnitogorsk and Kuznetsk iron and steel works.

In 1940, this country produced nearly 15 million tons of pig iron or almost four times as much as in 1913; 18,300,000 tons of steel or 4.5 times more than in 1913; over 31 million tons of oil or 3.5 times above the 1913 level.

The years of the five-year plans witnessed the rise of new industrial regions in the Urals and in Siberia, in the North and in the Caucasus, in Central Asia and in the Far East. New seats of industry appeared in all the Union republics.

All in all, in 1940 the output of Soviet large-scale industry was nearly 12 times, and the machine-building output nearly 50 times, greater than in 1913. The U.S.S.R.

not only stopped importing but began to export automobiles, tractors and agricultural machines. The Soviet Union assumed a world lead for the specific gravity of machine-building in the total volume of its output.

HISTORIC TEST

The Great Patriotic War of the Soviet people against the German-fascist invaders (1941-45) was a stern test for Soviet industry. Taking advantage of their temporary military supremacy, the armoured Nazi hordes developed a swift offensive, which carried them deep into the country. For a time, that deprived the Soviet Union of its southern heavy industry base, which prior to its occupation by the enemy had been producing 68 per cent of the country's pig iron and 58 per cent of its steel. Many people abroad thought Soviet industry would never recover from the blow.

Under exceedingly difficult war-time conditions, the Soviet Union carried out its bold plan of evacuating millions of workers, technicians and office employees as well as hundreds of industrial enterprises deep into the rear, principally to the eastern regions of the country. Almost on the firing line, in the face of savage air raids, the workers dismantled factories and plants and carried away rolling mills, complex power and other equipment. More than 1,300 big enterprises were removed to the Urals, to Siberia and other regions. Many of them were placed in service by the first half of 1942.

Industrial construction did not cease during the war. Many new enterprises were put into operation. Dozens of the biggest factories were radically reconstructed. The net result was that the Soviet Army began to receive

an increasing supply of weapons and equipment which were superior to what the enemy had. The country's industry honourably fulfilled its duty.

The defeat of the fascist hordes near Moscow, Stalingrad and Kursk bewildered the Hitler command. In 1943, the fascist newspaper *Das Schwarze Korps* wrote in consternation: "To us it seems a miracle that ever new masses of people and machines should rise out of the unbounded Soviet steppes; it seems as though some great magician were moulding an endless number of Bolsheviks and weapons from Urals clay."

But that was no miracle. It was the outcome of the strength of the Soviet system, a people's system, which has the undivided support of the nation. The Soviet people exerted a heroic effort and shoulder to shoulder with other freedom-loving nations crushed the fascist threat and triumphed over the enemy.

The fascist aggressors seriously damaged Soviet industry. In the occupied regions, they destroyed 31,850 factories and plants, blasted mines which in pre-war years yielded 60 per cent of the country's coal, and destroyed power stations with a total capacity of 5 million kilowatts.

Altogether, the direct damage inflicted on the Soviet national economy amounted to 679,000 million rubles. The war held up the development of Soviet economy for approximately ten years. The losses suffered by the Soviet Union were unparalleled in world history. Yet, resting on its socialist system of economy, the Soviet Union recovered in the course of a single five-year plan.

The iron and steel industry of the South was completely restored on a new technical basis and began to produce more metal than before the war. The output of metal in

the eastern regions was considerably expanded. The factories evacuated during the war were not taken back but merged with the industry of Siberia, Kazakhstan and other eastern regions.

In 1950, coal output exceeded 260 million tons, which is 50 per cent more than in 1940. The Donbas again became the nation's chief coal supplier. Oil output surpassed the pre-war level. All the power stations, including the Dnieper Hydropower Station, were restored and a number of big new hydropower stations were put into operation. Industry was equipped with more than double the number of machine-tools it had before.

All the other branches of industry developed successfully on this basis. During the first post-war five-year plan, output of woollen fabrics and of leather footwear increased 2.9 and 3.2 times respectively. The food industry alone produced more in terms of cost than did the entire large-scale industry of pre-revolutionary Russia.

Altogether, more than 6,000 large industrial enterprises were restored or built anew during the Fourth Five-Year Plan.

Recovering rapidly from the heavy damage sustained during the war, Soviet industry began to move ahead confidently.

The Fifth Five-Year Plan, completed in 1955, was a further important step in the advance of the entire national economy. In 1955, industrial output was 3.2 times greater than in 1940. In that period, production of machine-tools and equipment was stepped up 4.7 times. The U.S.S.R. emerged as Europe's greatest, and the world's second greatest, producer of pig iron, steel, coal and electric power.

The advances made by the heavy industry and agriculture enabled the country to more than double the output of consumer goods compared with pre-war years.

The period of the current, Sixth Five-Year Plan (1956-60), which is being successfully fulfilled, is witnessing a fresh upsurge of Soviet industry.

* * *

At this juncture it would be appropriate to give a general picture of Soviet industry, of its main branches, and of its prospects.

The decisive indices of industrial development are the output figures for coal, oil, gas, metal, machines and electric power. Therefore, let us first examine the heavy industry.

HEAVY INDUSTRY

Metal. Prior to the Revolution, the Ukraine was the country's only coal and metallurgical base. This base was fundamentally reconstructed under the five-year plans and today it produces a few times more pig iron, steel, rolled stock and coal than before the Revolution.

Another coal and metallurgical base was set up in the East before the outbreak of World War II. That opened up the inexhaustible riches of the Urals, the Kuzbas, and Kazakhstan which were hardly touched before. The Urals alone has tremendous deposits of natural wealth such as ores, coal and oil. Together with other eastern regions, it honourably served the country in the war against fascism, supplying the Army with first-class armaments. After the war, it was the basis on which the national economy was restored. It sent metal to the Ukraine, Byelo-

russia, Moldavia, Lithuania, Latvia, Estonia, the Karelian Republic and to the central regions.

The country's eastern coal and metallurgical base includes coal and ore mines, power stations, and metallurgical and machine-building plants. One of these, the Kuznetsk Works, is among the biggest iron and steel enterprises in the world. It is situated in the new town of Stalinsk which grew out of the small settlement of Novokuznetsk. Its construction was started in 1930 and the first section began to operate in 1932.

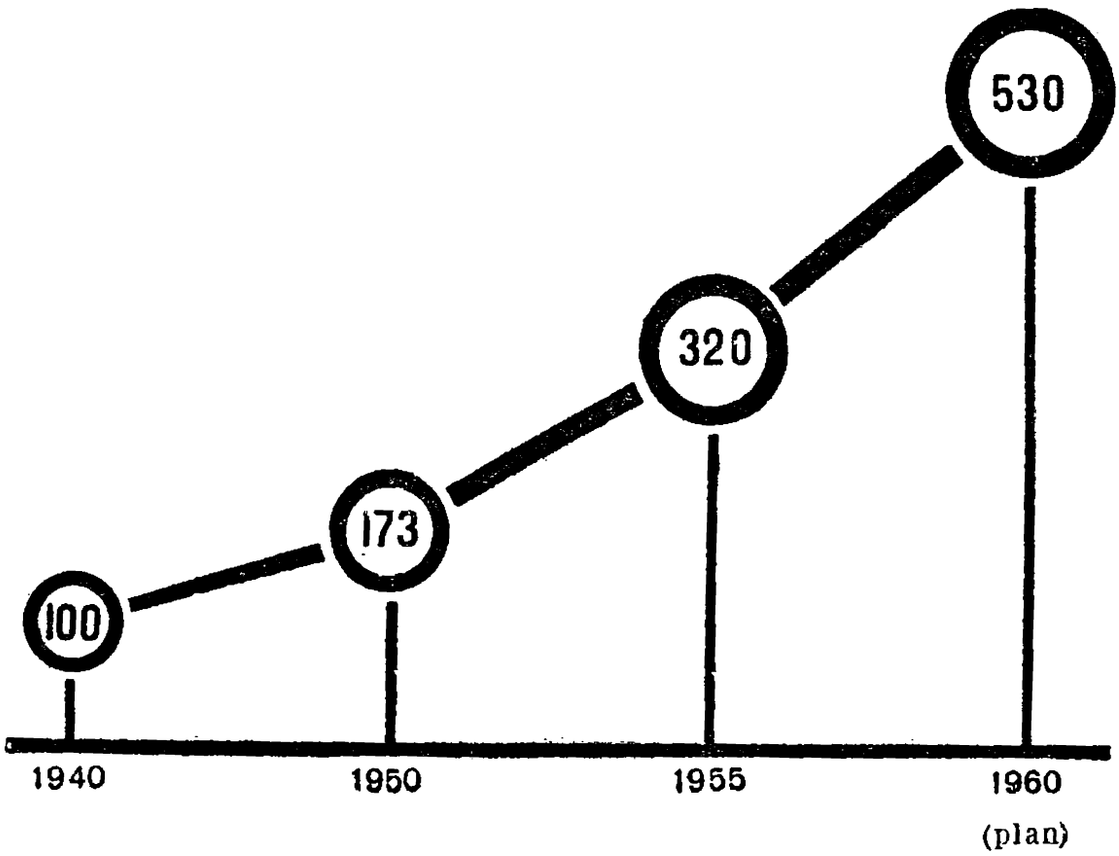
Annually, the Kuznetsk Works produces about as much steel as did all the iron and steel plants of Russia in 1913. Consisting of numerous metal-producing enterprises, it has its own mines, while its shops, each of which can be compared with a large factory, produce pig iron, steel, rolled stock, rails, coke, chemical products and refractories.

At first the plant developed on the basis of the extremely rich deposits of coking coal in the Kuzbas and iron ore brought over a distance of more than 1,200 miles from Mount Magnitnaya in the Urals. Today, it operates mainly on local ore from Gornaya Shoriya, which is only a few dozen miles away.

The plant is steadily increasing its output, while its personnel are constantly enhancing their production experience. Every year, thousands of Kuznetsk metalmakers use their spare time to study at various technical courses and schools. The plant has its own scientific and technical library, a house of engineering, a palace of culture, a theatre and a few clubs.

The Kuznetsk Iron and Steel Works not only gives the country a tremendous amount of metal but is also a base for the further industrialization of Siberia.

The Magnitogorsk Iron and Steel Works, situated in the South Urals, Chelyabinsk Region, is another of the Soviet Union's industrial colossuses in the East. Its construction was started in 1929 and was an integral part of the plan of setting up an eastern coal and metallurgical base—the Urals-Kuzbas.



Growth of industrial output (per cent)

In 1955, the Urals and West Siberia produced over 14 million tons of pig iron, which is more than what was put out in Britain. But that is still not enough for the eastern regions, which annually get a few million tons of metal from the European part of the Soviet Union. To meet this demand, the country's third huge metallurgical base with an annual output of 15-20 million tons of pig iron will be created in Siberia within the next few five-year periods. By 1960, this new industrial region

will be putting out more pig iron and coal than was produced in the U.S.S.R. in 1950.

The central and western regions will have their own metallurgical bases in the near future. Around Kursk there are enormous deposits of iron ore (known as the Kursk Magnetic Anomaly). The most modest estimates show that half of the world's reserves of iron ore are concentrated there. It is extremely difficult to mine ore in this area, for it lies beneath an immense layer of sand extending from Kiev to the suburbs of Moscow. But that will not stop Soviet people, who are eager to develop the Kursk deposits. The first mine has been built near Stary Oskol (Belgorod Region) and mining has started in a number of other sectors as well.

Compared with 1913, steel output has increased more than 11 times. In 1955, the Soviet Union produced 45.3 million tons of steel, while the total output of Britain, France and West Germany was 54 million tons. It will be remembered that in 1937 these countries produced twice as much steel as the U.S.S.R.

The 1960 output targets are: 53 million tons of pig iron, 68.3 million tons of steel, and 52.7 million tons of rolled stock, which is respectively 3.6, 3.7 and 4 times more than in 1940.

In the course of the Sixth Five-Year Plan, the country will not only step up the output of ferrous metals, but will expand the production of alloy steel, electrical steel and other economically important quality metals. Nonferrous metallurgy will take a long step forward. The output of aluminium will be more than doubled.

Fuel. In 1956, this country produced 429 million tons of coal. That is 15 times more than was mined in Russia in 1913.

This striking growth was achieved during the five-year plans when the output of the Donbas was increased several times and the country developed a number of new coal fields: Kuznetsk in Siberia, Karaganda in Kazakhstan, Cheremkhovo in Eastern Siberia, Pechora in the North, Moscow, and some others.

The Kuznetsk coalfields, for example, have a few times more coal than the Donbas. It lies in enormous layers, some of which are as much as 65-80 feet thick. The extremely rich coal basin around Karaganda was surveyed and developed during the period of the first five-year plans. In many sectors of this basin coal is mined by the opencast method with the help of the latest types of machines. The output in these regions is rapidly increasing.

Mines are being equipped with modern machinery. In 1940, the country's mines had only 24 coal-cutting combines but by 1954 that figure rose to 1,600, which is a 66-fold increase. In the same period, the number of coal-loading machines increased from 36 to 3,000, or more than 83 times. That furnished real possibilities for considerably expanding the output of coal during the Sixth Five-Year Plan.

One of the most important tasks in this sphere is to accelerate coal output in the European part of the country, primarily in the Donbas.

Oil and its by-products play as important a part in the national economy as coal. In 1956, the Soviet Union produced nearly 84 million tons of oil, or 8 times more than 40 years ago!

It was formerly believed that the Caucasus and Central Asia were the only oil-bearing regions in the Soviet Union. That belief has been upset by Soviet geologists who have discovered vast quantities of oil in other places. An

oil field known as Second Baku was developed in the East prior to the outbreak of World War II. Second Baku occupies a territory of more than 155 square miles between the Volga and the Urals, stretching from the Caspian Sea to the Arctic Ocean.

Output in Second Baku, particularly in Bashkiria and the Tatar Autonomous Republic, is steadily rising. In 1956, the Tatar Autonomous Republic was the biggest oil producer in the country. More oil was extracted there than throughout the whole of tsarist Russia in 1913. Oil output is also mounting in the western regions of the Ukraine, in Central Asia, and on Sakhalin Island.

Bashkiria is now supplying oil not only to the central regions but also to Siberia. A large refinery in Omsk operates on Bashkir oil, receiving it from the 827 mile long Tuimaza-Omsk pipeline, which has been laid across the Urals Range and five rivers. Towards the end of the sixth five-year plan period it will be extended to Irkutsk, in other words, it will be 2,298 miles long.

Natural gas is another fuel whose output is being expanded in the Soviet Union. The country is developing the Saratov deposits of natural gas, which is carried to Moscow by a 522 mile long pipe; the 319 mile Dashava-Kiev line supplies gas to the capital of the Ukraine.

Great deposits of natural gas have been discovered in Stavropol Territory. A line stretching for 807 miles has been laid between Stavropol and Moscow. It is the longest gas line in the U.S.S.R. and in Europe. After the second section of this line is completed, Moscow will be receiving 20 times more fuel than it is getting by the Saratov-Moscow pipe. By the end of the current five-year plan period, that will enable most of the factories and plants in the capital to operate on gas. Stavropol natural gas is al-

so going to Rostov-on-Don and it will be piped to Taganrog, Zhdanov, Novocherkassk, Shakhty, Voronezh and many other cities.

A big shale gas works has been built on the basis of the rich deposits of shale in Estonia. This gas is being piped from Kohtla-Järve to Tallinn and Leningrad.

The Soviet Union's peat reserves are estimated at 150,000 million tons. Peat is especially plentiful in the north-western and western regions.

The U.S.S.R.'s fuel base will be substantially enlarged during the Sixth Five-Year Plan. In 1955, coal took up 65 per cent of the country's fuel balance, in spite of the fact that oil and gas are cheaper and more effective. For example, gas is eight times cheaper than coal. That is why in 1960, the 1955 coal, oil and gas output level will be exceeded by 52, 91 and nearly 300 per cent respectively.

Machine-Building. Under Soviet rule, the country built hundreds of machine-building plants that are now producing equipment for all branches of the national economy. By 1955, gross industrial output was 27 times greater than in 1913, while the output of the machine-building industry increased more than 160 times.

Machine-tool building is the leading branch of the machine-building industry, for it turns out machines that make machines. The more machine-tool building is expanded the greater will be the possibility of extending other branches of industry.

On the eve of World War II, the Soviet machine-tool industry had numerous big enterprises that were built during the years of the five-year plans. These included gear-cutting and aggregate machine plants and the Urals Machine-Building Plant in Sverdlovsk, an automatic

machine factory in Kiev, machine-tool building plants in Gorky and Kharkov, a carburettor works in Kuibyshev, the Orjonikidze Machine-Tool Plant, the Kalibre Tool-Making Works and the Frezer Works in Moscow.

Many new, high-capacity machine-tool and machine-building plants were built and put into operation in the post-war period. During the Fifth Five-Year Plan, the output of the machine-building and metal-working industry increased 2.2 times.

The growth of Soviet machine-building may be illustrated by the following example: the country produced 1,500 metal-cutting lathes in 1913, 58,400 in 1940, and 121,300 in 1956. In step with this tremendous leap, the quality of the machine-tools and their productivity have been radically improved.

Leningrad is the country's oldest machine-building centre. Not a single foreign industrial exhibition shared in by the Soviet Union passes without a display representing the products of the factories of Leningrad. These products include engines and TV sets, cameras and wireless receivers, machinery for iron and steel works, turbines for hydropower stations, trawlers and measuring instruments.

Renown has been won by other machine-building centres such as Moscow, Kharkov, Minsk, Sverdlovsk, Novosibirsk and Tashkent.

Soviet factories are putting out hundreds of different kinds of modern aircraft, automobiles, electric locomotives and ships.

Russia was the home of the world's first aircraft but she did not have any aircraft industry to speak of. During the pre-war five-year plans the country built a big aircraft industry which later contributed greatly towards the

defeat of the German fascist invaders. The output potential of the Soviet aircraft industry in those years is seen from the fact that during the last three years of the war the Soviet Union built up to 40,000 planes annually.

The aircraft industry is developing with the help of the latest achievements of science and engineering. The Soviet Union is producing all kinds of modern jet aircraft.

The country has a developed automobile industry. Automobile works in Moscow, Gorky, Chelyabinsk, Yaroslavl, Minsk and other cities annually produce hundreds of thousands of lorries and passenger cars.

The Moscow Auto Works puts out passenger cars, powerful lorries, and comfortable and roomy buses. The low-consumption car works in the capital manufactures the popular *Moskvich* passenger car. The Auto Works in Gorky produces the *Volga* and *Zim* passenger cars as well as lorries. The Minsk Auto Works supplies construction projects with tip-up lorries with a pay load ranging from 10 to 25 tons. Soviet-made automobiles can be seen in China, Norway, Denmark and a number of other countries.

More than 300,000 tractors (in terms of 15 h.p. units) are made in the U.S.S.R. annually. The country has big tractor factories in Stalingrad, Kharkov, Chelyabinsk, Altai, Vladimir, Minsk and Lipetsk, and agricultural machine-building works in Rostov, Gomel and Tashkent. The Rostov Agricultural Machine-Building Works alone accounts for more agricultural machines than were produced in tsarist Russia.

However, machine-building is still behind in supplying modern equipment for a number of branches of the rapidly expanding national economy. Under the Sixth Five-

Year Plan, the machine-building industry must provide factories and plants with new highly productive equipment. First and foremost, that concerns metal-cutting machine-tools, press and forge equipment, foundry machines, and equipment for automatic and semi-automatic production lines. The production of metal-cutting machine-tools will be almost doubled by 1960. The 1960 output figures will be: metal-cutting machine-tools—200,000; forge and press machines—25,800 (for comparison let us recall that in 1928 the Soviet Union produced no more than 2,000 machine-tools of all kinds). The country is making powerful hydraulic and steam turbines.

Radio engineering and instrument-making will also be expanded. Emphasis is being laid on the production of instruments controlling and regulating technological processes. In the current five-year period the output of instruments and means of automation will be increased 3.5 times. Scores of specialized factories will be built to enhance the output capacity of the instrument-making industry.

Transport and agricultural machine-building will also considerably step up production. In 1960, the Soviet Union will produce 650,000 automobiles.

Chemical Industry. In the past 25 years the Soviet Union has practically recreated its chemical industry.

The Bobrikovo, Yaroslavl, Berezniki, Voskresensk, Aktyubinsk, Gorlovka and other big chemical plants and factories were built before the outbreak of World War II. They are supplying all branches of the national economy with the most diverse range of products.

The base of the chemical industry will be considerably expanded during the Sixth Five-Year Plan. In

1960, the country will produce 19,600,000 tons of mineral fertilizers, or twice as much as in 1955. Factories will substantially increase the output of new kinds of concentrated mineral fertilizers and new, more effective chemicals against pests and plant diseases.

Synthetic rubber, plastic, alcohol, detergents and other chemical products will be put out in considerably larger quantities. For example, oil, natural gases and oil by-products will be used to increase the output of synthetic rubber 2.2 times by 1960. During the Sixth Five-Year Plan, synthetic products made from oil and natural gases will put an end to the consumption of grain and vegetable oils for technical purposes.

In the course of the present five-year plan, the output of synthetic materials for artificial fibre will increase 5.9 times, and the output of automobile tyres—2 times.

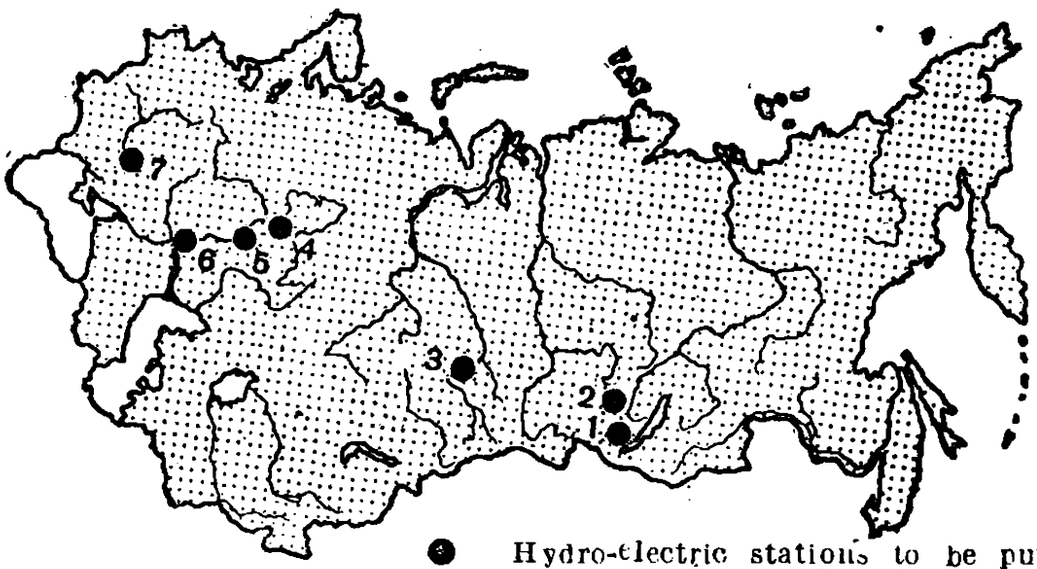
Electric Power. In order to push ahead the development of all branches of economy, the Soviet Government set itself the task of electrifying the country and thus giving the national economy an advanced power base. V. I. Lenin said that communism is Soviet rule plus the electrification of the whole country.

Power engineering is swelling by leaps and bounds. In 1956, power stations throughout the country generated 192,000 million kilowatt-hours of electricity. That means that in a single month they gave more electric power than was generated by all the power stations of old Russia in the course of eight years. Today, the Soviet Union is the biggest producer of electric power in Europe and as such occupies second place in the world.

In 1960, the power output will be 320,000 million kilowatt-hours.

Most of the electric power in this country is generated by thermal power stations operating on coal or peat.

The new thermal power stations under construction in the Soviet Union are being equipped with 100,000-150,000 kilowatt turbines.



● Hydro-electric stations to be put into operation under the Sixth Five-Year Plan 1. Irkutsk. 2. Bratsk (first section). 3. Novosibirsk. 4. Votkinsk. 5. Kuibyshev. 6. Stalingrad. 7. Kremenchug.

Large-scale hydropower construction in the U.S.S.R.

Soviet power engineers have built thermal power stations with a capacity of over a million kilowatts, such as the Belovo and Tom-Usinsk in the Kuzbas, the Troitsk, South-Urals and Verkhny Tagil in the Urals, the Dnieper and Starobeshevo in the Ukraine, and the Nazarovo in Siberia.

In addition to thermal power stations, the country is building a large number of hydropower stations.

The Soviet Union has enormous reserves of "white coal." It is estimated that the energy of the rivers runs into 300 million kilowatts. Full utilization of the country's hydro resources will allow building hydropower stations that will annually generate 1,500,000 million kilowatt-hours of electricity.

Hydropower station construction was started under Soviet rule. The first project was the Volkhov Hydropower Station. The year 1932 witnessed the launching of the 558,000 kilowatt Dnieper Hydropower Station, which at that time was the biggest in Europe.

In Soviet years, the country built and placed in service a total of more than 300 large and medium capacity power stations, including 90 hydropower stations. In the period of the Fifth Five-Year Plan, such huge, superbly equipped hydropower stations as the Tsimlyanskaya, Gyumush, Mingechaur, Kama, Gorky and Kakhovka began to operate. The Kuibyshev Hydropower Station, which in 1956 attained a capacity of 1,260,000 kilowatts, became the biggest in the U.S.S.R.

The Kairak-Kum Friendship of Peoples Hydropower Station, the biggest in Central Asia, appeared on the banks of the Syr-Darya. It was built by workers representing more than 30 nationalities, and will give power to Tajikistan, Uzbekistan, Kazakhstan and Kirghizia.

In the single year of 1956, the country's power output increased by more than 20,000 million kilowatt-hours.

Parallel with large thermal and hydropower stations, many kolkhoz and inter-kolkhoz power stations are being built. These are providing the necessary power base for collective-farm production and are improving the life of the collective farmers. For example, collective farms in Byelorussia, Lithuania and Latvia joined forces to build a hydropower station in Vitebsk Region, at the junction of the frontiers of these three fraternal republics. Generating more than a million kilowatt-hours of electricity, this power station serves scores of collective and state farms and machine and tractor stations. Many hydropower stations are being built in Armenia to utilize its

numerous fast mountain rivers. By 1956, electricity became part and parcel of the life of 79 per cent of the collective farms in that republic.

The mass utilization of modern machinery is giving the Soviet people the opportunity of building ever bigger hydropower plants.

First-class machinery—powerful earth-digging machines, dredges, cranes with capacities ranging from one and a half to 450 tons, and tip-up lorries, some with a pay load of 25 tons—was supplied to the builders of the Kuibyshev Hydropower Station. More than 600 enterprises throughout the country sent materials and equipment for the project. During the construction of the Dnieper Hydropower Station, machine power totalled 2.5 h.p. per worker employed on the job; however, on the Kuibyshev site this figure was seven times higher.

The Kuibyshev development and the second Volga titan, the Stalingrad Hydropower Station, which will begin to operate in the course of the sixth five-year plan period, are among the biggest in the world, but even they are only a stage leading up to the construction of still bigger power stations.

Construction has been started on huge power developments both in the western and eastern regions of the country. The current five-year plan is laying the foundation for the utilization of the mighty Siberian rivers. A hydropower station is being erected at Novosibirsk. The first section of the Irkutsk Hydropower Station, with a capacity of 660,000 kilowatts, began to operate in 1956. A 3,600,000 kilowatt hydropower station is under construction on the lower reaches of the Angara at Bratsk; it will generate more electric power than the Kuibyshev and Stalingrad developments taken together.

Unique 250,000-300,000 kilowatt hydroturbines and powerful transformers are being made for the Bratsk project. The machinery working on the site includes rock excavators with 213 cubic foot buckets, superpowerful tip-up lorries, boring machines and huge cranes.

The Angara-Yenisei region has tremendous unexploited deposits of coal and iron ore as well as raw material for the production of aluminium, magnesium, nickel and synthetic rubber. The launching of the great hydropower stations on the Angara and Yenisei and the network of thermal power stations will promote the rapid development of the productive forces of this region. A mighty industrial region with its own coal, iron and steel, machine-building, chemical, wood-working and paper industries will arise in the Siberian expanses.

Fulfilment of the Sixth Five-Year Plan entails the solution of the very complicated task of creating a single power system for the whole of the European part of the U.S.S.R. So far, the country has three big inter-regional power systems—Urals, Southern and Central. When both the Kuibyshev and the Stalingrad hydropower stations will be operating at their full capacity there will be an extensive system of transmission lines connecting them with the power networks of the Centre, the South and the Urals.

Furthermore, work will be started on a single power system for Central Siberia. The power networks of Georgia, Azerbaijan and Armenia will also be united.

This will ensure electric power for the newly developed areas which are experiencing a shortage at present.

Nuclear power as well as the energy of the wind, the sun and semi-conductors are being utilized on a growing scale.

OUTPUT OF CONSUMER GOODS

The presence of a heavy industry allowed the country to embark upon a fundamental reconstruction of the light and food industries and to increase their output capacity many times over.

In tsarist Russia, the textile industry, which was concentrated chiefly in the northern regions, was the most developed branch of the industry producing consumer goods. In Soviet times, the textile industry was not only enlarged but was given important new centres in Central Asia, Western Siberia, the Ukraine, Byelorussia and in the Baltic republics. Today, every Soviet republic produces textiles.

The footwear, knitted-wear and food industries have been advanced to a high level of development and equipped with the latest machinery. A number of new branches of the food industry such as canning, tea, margarine, vitamins and food concentrates, which never existed in the country, have been set up.

In the first 20 years of Soviet rule, the total output of the food industry grew 4.4 times, textiles—3.2 times, factory-made footwear—almost 20 times. Towards the close of the second five-year plan period (1937), production of consumer goods was 6.5 times greater than in 1913.

The output of clothes, furniture, food-stuffs, and household utensils has been expanding uninterruptedly since the end of the war, when many branches of the munitions industry switched over to the production of consumer goods. By 1950, the end of the fourth five-year plan period, the light industry surpassed its pre-war, 1940, volume of output.

The Fifth Five-Year Plan's targets for the output of consumer goods were overfulfilled. Every year, hundreds of new enterprises of the light and food industries are opened in Siberia and in the Urals, in Moldavia and in the Volga Region, in the North and in the Far East.

The daily output of the Kamyshin Textile Combine on the Volga alone comprises nearly 1,100,000 yards of various fabrics, ranging from cambric to semi-velvet. Other important producers are the new Kherson and the second Barnaul Textile Combine, the Worsted Mill in Minsk and the Silk Mill in Benderi.

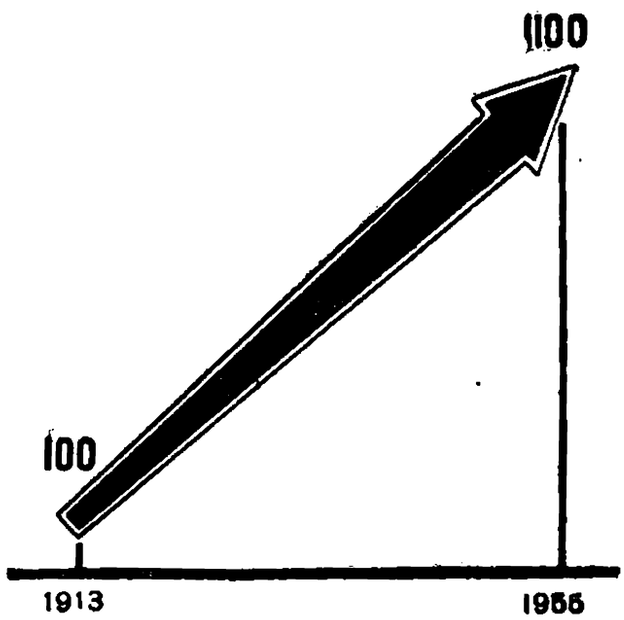
The biggest of the newly built food enterprises include the Poltava Meat Combine, the fat-extracts factories in Kokand, Liski, Karshi and Khabarovsk, a number of big sugar refineries and canning factories. The conveyers installed in the Alma-Ata (Kazakhstan) Meat Canning Plant put out 140,000 cans of superior products per day.

The construction of new food, textile, footwear, knitted-wear and other enterprises is ensuring a rapid growth of the output of consumer goods.

In 1956, the Soviet Union produced nearly 6,000 million yards of cotton fabrics, 289,440,000 yards of woollen fabrics, 314 million pairs of footwear, close to 4,350,000 tons of sugar, 2,368,000 tons of meat, and about 17,300,000 tons of butter and other dairy produce.

The output of consumer goods that are in greatest demand is growing with particular speed. For example, while the over-all production of woollen fabrics will increase by 3.6 per cent in 1957 compared with 1956, the output of pure-wool suit fabrics will grow by 15 per cent. The same concerns footwear; the total increase of 6.7 per cent provides for a 14 and 22 per cent rise in the output of box-calf and children's footwear respectively.

Soviet food enterprises are turning out tens of millions of tons of products annually. New machinery is helping to step up the output of a wide range of foods. In the post-war period, food enterprises installed more than 25,000 new machines, over 400 automatic production lines, and nearly 3,000 automatic and semi-automatic machines. In 1956, the goods produced by the light industry over and above plan amounted to 3,000 million rubles' worth, and by the food industry—4,000 million rubles' worth.



Output of consumer goods
(per cent)

Certain items are still produced in insufficient quantities, but a comparison between the per capita output today and the level in 1913 will show the tremendous progress that has been achieved. For instance, in 1956, the U.S.S.R. produced 814,320,000 yards of silk fabrics, or 3.99 yards per capita. In other words, compared with 1913 Soviet silk output has increased 17.7 times. In tsarist Russia, silk was a luxury which the workers and peasants could not afford, while today silk fabrics are in widespread use.

In the past 30 years, the output of consumer goods has increased more than elevenfold and continues to grow at a rapid rate. Today, this country has all the necessary conditions to promote the swift expansion not only of the means of production but also of the production of

consumer goods. Within the next few years that will result in a big stride forward towards ensuring an uninterrupted supply of all kinds of consumer goods and foodstuffs.

Nearly 1,500 new factories and plants producing consumer goods were put into operation during the fifth five-year plan period. All of them are large enterprises, yet because of the steep rise in agriculture the country is beginning to put out more agricultural raw material than can be handled by quite a number of branches of industry (for example, the sugar refining, dairy and flax industries). For that reason, the Sixth Five-Year Plan provides for the construction of enterprises of the light and food industries on a still bigger scale. The capital investments in the textile, light, food, meat and dairy, and fish industries will amount to nearly 59,000 million rubles or 26,000 million rubles more than in the preceding five-year plan period.

Resting on the developed technical and raw material base, the Soviet light and food industries will substantially expand the output of consumer goods as seen from the following targets for 1960 set in accordance with the directives of the 20th C.P.S.U. Congress for the Sixth Five-Year Plan:

Cotton fabrics	7,518 million yards
Woollen fabrics	392 million yards
Silk fabrics	1,160 million yards
Artificial fibre	330,000 tons
Sewing industry output	78,000 million rubles' worth
Linen and knitted wear	580 million pieces
Footwear	455 million pairs
Clocks and watches	33.6 million
Wireless and TV sets	10.2 million
Household refrigerators	635,000

Household washing machines	528,000
Motor-cycles	595,000
Bicycles	4,230,000
Sugar	6,530,000 tons
Meat (processed)	3,950,000 tons
Fish	4,200,000 tons
Butter and other dairy products (in terms of milk)	25 million tons
Vegetable oil	1,840,000 tons
Canned food	5,580 million cans

INDUSTRY OF THE NATIONAL REPUBLICS

The Russian Soviet Federative Socialist Republic is the biggest of the Union republics and the largest industrial and agricultural producer in the country. In the past, all the regions of the R.S.F.S.R. bore some stamp of economic and cultural backwardness. Today, each of these regions has a developed industry and a large-scale agriculture.

All the Soviet republics have scored outstanding successes in industry.

Of tsarist Russia's outlying regions, the *Ukraine* was the most developed economically. She had an iron and steel, a coal and other industries. However, her metal-working and machine-building industries were very feeble. The Ukraine was unable to supply herself with enough machines, machine-tools and equipment.

New iron and steel and machine-building plants and mines were built there in Soviet years, and the republic began to produce more pig iron and coal than France and Italy put together. Her food and light industries attained a high level of development.

Today, the republic's industry has a huge power base,

which includes such great hydropower stations as the Dnieper and the Kakhovka plants.

In the course of the sixth five-year plan period, total industrial output in this republic will increase by approximately 70 per cent. In 1960, the Ukraine will produce something like 200 million tons of coal, more than 25 million tons of pig iron and 20 million tons of rolled stock. Coal production in the Donbas, the Dnieper area and the western regions will be expanded. The machine-building industry will step up output. The Kakhovka Hydropower Station has been completed and the Kremenchug Hydropower Station will be put in operation.

The Ukraine will be giving the country more fabrics, sugar, butter and other products than it ever did before.

Byelorussia, too, is a highly industrialized republic. Forty years ago it did not have a single big factory or plant, but in 1940, her industry contributed 80 per cent of her total output.

It built such huge enterprises as the tractor plant and auto works in Minsk, the fine broadcloth mills in Minsk and Grodno, the carpet and plush combine in Vitebsk. Byelorussia's industry is supplying the country with 25 and 40 ton tip-up lorries, electric motors, bicycles and so forth. Minsk is exporting its industrial output to more than 30 foreign countries. Further rapid progress is being made by this republic's industry under the current Sixth Five-Year Plan. Output of electric power will increase approximately 2.1 times, peat—1.8 times, metal-cutting lathes—2 times. Tractors, automobiles and motor-cycles will be put out in much greater numbers.

In spite of its tremendous natural wealth that includes coal, oil, and non-ferrous metals, *Kazakhstan* was one of tsarist Russia's most backward outskirts. Its natural

wealth was not exploited. The Kazakhs were nomads with a low level of economic and cultural development. Industry consisted of primitive establishments that were engaged in the primary processing of agricultural produce.

At present, Kazakhstan has a coal, oil, ferrous and non-ferrous metal, machine-building and chemical industry. This republic is the Soviet Union's leading producer of lead, and occupies second place for the output of copper.

Compared with 1913, Kazakhstan's gross industrial output has increased 33 times.

Big industrial enterprises have been built in the republic. These include the iron and steel plant in Temir-Tau, the ferro-alloy plant in Aktyubinsk, the heavy machine-building works in Alma-Ata, the mine-equipment factory in Karaganda, the automatic press works in Chimkent. Local raw material is used as a basis for developing the light (leather and footwear, cotton-cleaning, textile) and food (meat, canning, sugar) industries.

The huge Ust-Kamenogorsk Hydropower Station on the Irtysh began to operate in 1953 and work has been started on the Bukhtarma Hydropower Station.

The Karaganda coal basin has acquired an important position in the country's fuel balance. It is meeting the requirements of industry, power stations and railways not only in Kazakhstan, but also in Central Asia, the Urals and other regions.

In the very near future, metal will be coming from the furnaces of the Karaganda iron and steel works which is now under construction. It will have an annual output capacity of 1,350,000 tons of pig iron. It is planned to build an aluminium, a ferro-alloy and a combine-harvester works in Pavlodar, a rolled stock equipment works in Petropavlovsk, and a textile mill.

Once a backward region, *Uzbekistan* has stepped to the fore as a highly industrialized republic. It is putting out metal, machines, textiles and other products. Prior to the Revolution, industry in Uzbekistan employed a total of 16,000 workers, but today, the Tashkent textile mill alone has more than 20,000 workers. In terms of per capita output, the republic is producing ten times more electricity than Turkey.

Tens of big new enterprises equipped with the latest machinery have been built and many of the old factories and plants have been enlarged.

Compared with 1940, Uzbekistan is smelting almost 20 times more steel. The republic has become an important centre of metallurgy and of the rare metals industry.

Tremendous industrial progress has been made by the Transcaucasian republics, including *Azerbaijan*. By 1955, gross industrial output in this republic was two times greater than in 1940 and almost 12 times greater than in 1913. New branches are being developed alongside the oil industry. A pipe-rolling mill and a synthetic rubber plant have been opened in Baku. New seats of industry—Sumgait (aluminium), Dashkesan (iron ore), and the Mingechaur Hydropower Station—have appeared on the map of Soviet Azerbaijan.

By the end of the sixth five-year plan period, the republic is expected to produce up to 15,700,000 tons of oil annually.

The Soviet Baltic republics are making exceptionally long strides in industrial development. The *Latvian S.S.R.* can be taken as an example.

Unlike many other outskirts of Russia, Latvia had a developed industry already before World War I. In the

period between 1920 and 1940, when she was torn away from Soviet Russia, her industry declined. The key positions in industry were seized by foreign capital. In 1938, industrial output dropped to 56 per cent as compared with the 1913 level. Industries processing agricultural produce for export began to get the most attention. Unemployment became rife.

In 1940, when the working people of Latvia set up Soviet power and the republic became part of the U.S.S.R., broad opportunities opened before her.

By 1955, Latvia's industry was turning out nearly six times more products than in 1940. This was a tremendous achievement considering that at least half of those years were spent in restoring the republic's national economy that was barbarously destroyed by the Hitlerite invaders. Today, Soviet Latvia is rapidly advancing her heavy and light industries and is producing electric machines, machine-tools, ships, and instruments. In the course of the fifth five-year plan period she built 73 new industrial enterprises.

The factories and plants of Riga are making telephone apparatuses, powerful electric engines, and high-quality textiles. The *Riga* and *Mir* wireless sets put out by the VEF factory of Riga are known not only throughout the Soviet Union but also abroad. Comfortable railway carriages are being put out by a factory which 20 years ago produced only locks and horseshoe nails. Big fish factories equipped with modern machinery have been built along the coast.

The Riga Thermal Power Station, one of the major projects of the Fifth Five-Year Plan, went into operation in 1955. The Plava Hydropower Station is under construction and the second section of the Riga Thermal Pow-

er Station will be launched in the course of the sixth five-year plan period. The food and light industries will be pushed forward.

TRANSPORT

Modern industry needs a good transport system, particularly railways.

In Soviet years, the railway network has been more than doubled. In 1955, the railway lines in operation totalled 75,000 miles, which gave the U.S.S.R. second place in the world (after U.S.A.).

The Turkestan-Siberian Railway (Turksib), connecting the cotton areas of Central Asia with the grain and industrial regions of Siberia, was completed before the outbreak of World War II. Construction has been finished on the South Siberian Railway, which is more than 4,250 miles long and gives a direct outlet to the coal and metal of the Kuzbas, and to the industrial centres of the Altai, Kazakhstan and Central Asia.

Tsarist Russia did not have a single electrified railway. Large-scale electrification of railways was started in Soviet years and during the fifth five-year plan period alone lines totalling more than 1,400 miles were electrified. The big hydro and thermal power stations that have been built enable the country to accelerate this work.

Steam locomotives whose production has been stopped are being replaced by highly efficient electric and diesel engines. In the course of the Sixth Five-Year Plan Soviet industry will produce not less than 2,000 powerful electric engines and 2,250 double-unit diesel engines. Under the current five-year plan, 5,030 miles of railway lines will be switched over to electric haulage. The important trunk lines marked down for electrification include the

Moscow-Donbas and the Moscow-Kuibyshev-Chelyabinsk-Omsk-Novosibirsk-Irkutsk railways (totalling 3,300 miles). The railways operating on diesel haulage will be extended from 4,400 to 15,500 miles.

During the Sixth Five-Year Plan, the country will build about 4,000 miles of new railway lines (which is 2.1 times more than was built during the Fifth Five-Year Plan). A new line will run from Alma-Ata to the state frontier and will be the shortest route to the western regions of China. It will be the third trunk line linking the U.S.S.R. with the Chinese People's Republic.

The U.S.S.R. has direct railway communication with Peking, Vienna, Helsinki, Berlin, Warsaw, Prague, Sofia, Budapest, Bucharest, Belgrade, Ulan-Bator and Pyongyang.

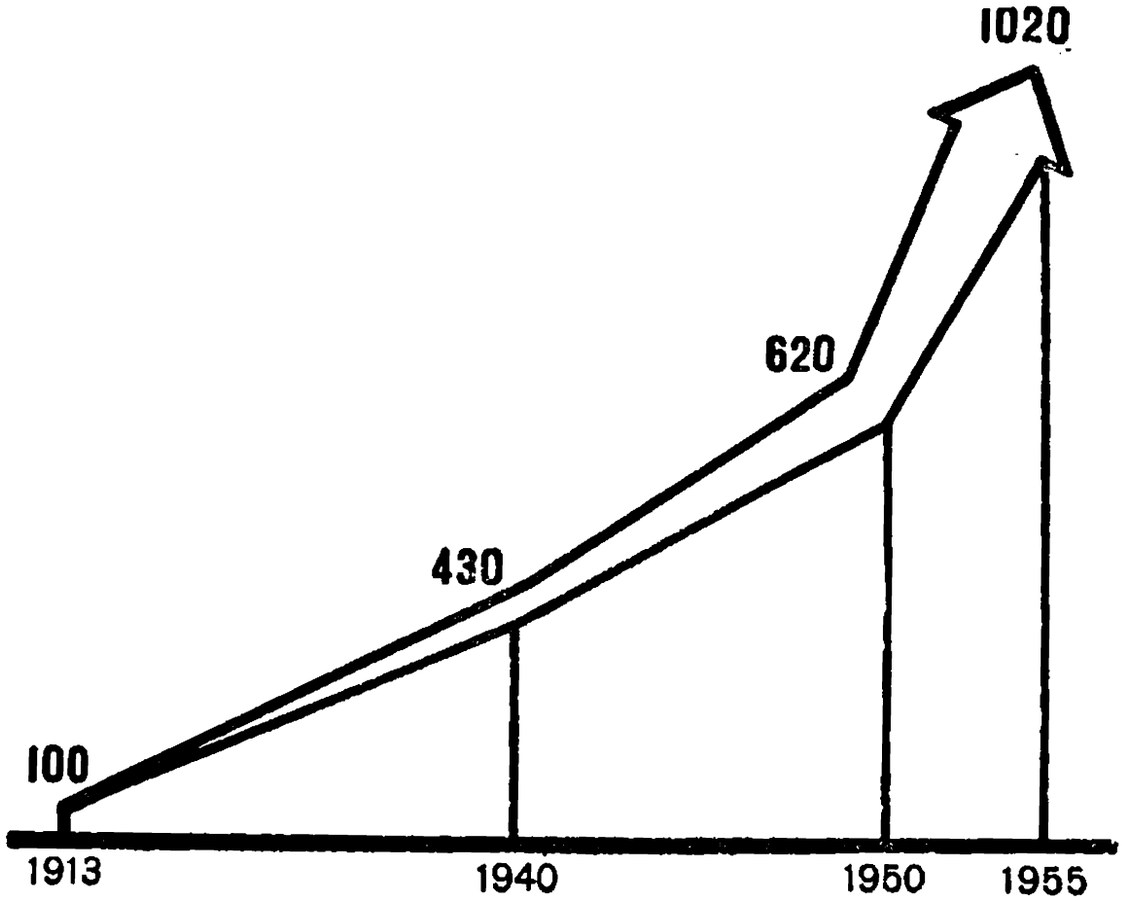
River transport plays an important role in the economy of the Soviet Union.

Old Russia did very little to utilize her numerous rivers. Only 20 per cent of the riverways were navigable. Many water arteries, including certain sections of the Volga, fell into disuse and became shallow.

River shipping was fundamentally improved through the reconstruction of waterways and the building of shipping canals and hydropower stations. The dam of the Dnieper Hydropower Station raised the water level in the Dnieper River and made it navigable throughout its length. The Baltic-White Sea Canal was opened in 1933. The Moscow Canal which provided a deep waterway between the Moskva and Volga rivers for large vessels was opened for navigation in 1937. The 63 mile long Lenin Volga-Don Canal and the Tsimlyanskaya Hydropower Station were placed in operation in 1952. The latter two projects were the final links in the chain uniting all the big

rivers of the European part of the U.S.S.R. into a single water artery giving the country wide access to sea routes.

Extensive work is going on to develop new deep-water routes on the Volga, the Kama, the Dnieper and other



Goods traffic—all transport facilities (per cent)

rivers. The river fleet and the merchant marine are getting new fast vessels as well as freighters, huge tankers and refrigerator ships.

The Soviet Union is building an atomic ice-breaker which will be able to cruise for two or three years without refuelling.

The development of the country's productive forces is enhancing the importance of the automobile transport. Hundreds of thousands of automobiles are being used to transport the most diverse freight. Road building is progressing by leaps and bounds. The years of the fourth

and fifth five-year plans alone witnessed the construction of the Moscow-Simferopol, the Kiev-Orjonikidze, the Minsk-Brest and other first-class automobile highways.

The 15,100 miles of asphalted highways that the country had in 1913 were lengthened to 129,000 miles by 1955.

The airways are the youngest branch of the transport system of the U.S.S.R.

The air transport is vitally important for the national economy of so vast a country where in many regions the aircraft is the only means of communication in winter.

The U.S.S.R. has a highly developed aircraft industry. Airlines connect Moscow with the capitals of all the Union republics and the major industrial centres as well as with the capitals of many foreign countries. Aircraft help collective and state farms to raise bumper crops. They scout for fish in the seas and guard forests against fires. Aircraft of the airborne medical service take off in any weather for the remotest corners of the country whenever medical assistance is required. Aircraft transport thousands of passengers and huge quantities of freight.

SCIENCE AND PRACTICE CO-OPERATE

Industrial development is one of the major concerns of the Soviet people. Unflagging attention is being devoted to promote the advance of engineering and the utilization in industry of the achievements of science. This offers the opportunity of raising labour productivity which in its turn is a decisive condition for the further rise of the entire national economy and of the standard of living. The combined efforts of men of science and production are yielding rich fruit.

In Soviet industry, the role of mechanization, automation and atomic power is steadily growing.

Overall mechanization of labour-consuming processes is being introduced in all branches of industry. In 1950, the coal industry completed the mechanization of cutting and breaking processes, the underground transport and the loading of coal into railway cars. The country has quite a few mines where all the work is being done with the help of machines. One of these is the Novo-Mushketovo Mine in the Donbas. This mine is equipped with Donbas coal-combines which free miners from manual labour by simultaneously cutting, breaking and loading coal. Coal is delivered from the face by scraper transporters. Electric locomotives haul cars loaded with coal, while hoisting machines raise the coal to the surface where machines sort it and load it into railway cars. At this mine machines also do the work at the development openings. True, the propping of the openings and the mine working is still done manually.

Some of the labour-consuming processes which require a great deal of labour power have yet to be mechanized at many mines. That is a serious hindrance to the growth of labour productivity.

Oil extraction has been mechanized in the Soviet Union. The turbine method of boring is becoming widespread. Still, this branch of industry likewise has a number of processes in which machines are utilized insufficiently.

The Sixth Five-Year Plan provides for a long step forward in the overall mechanization of all branches of industry.

Automation which is being introduced on a growing scale is a higher stage of mechanization. In blast- and

open-hearth furnace plants control of thermal and metallurgical processes has been completely automatized.

The automation of control equipment has been completed at all the big hydropower stations. Half of the generators at hydropower stations have been switched over to remote control. The personnel consists of a few operators to keep an eye on the instruments. The Dnieper Hydropower Station which has nine hydroturbines with a total capacity of 650,000 kilowatts and a number of other complex machines is served by only six operators per shift. Many stations are controlled from a master switchboard located tens and sometimes hundreds of miles away.

Industry is making ever wider use of automation. But in spite of that in some industries the level of automation is low. In the weaving industry, for example, of the total number of machines in 1954 only 36 per cent were automatic.

Automation of production processes will be greatly expanded in the next few years. In particular, not less than 40 operating rolling and pipe-rolling mills will be automatized. The main power systems and big sub-stations will be equipped with remote control apparatuses within the next two or three years. In the textile industry, 60 per cent of the machines will be fitted with automatic devices. Nearly 1,500 automatic production lines and conveyers were installed in 1956 alone.

The steadily rising level of automation is not scaring Soviet workers. Automation does not threaten them with unemployment. It makes labour lighter and helps to increase earnings, a fact which is frequently reported by the press. An automatic production line machining electric engine shafts was installed at the Volta Works in Tallinn. As a result, only 6 of the 40 workers formerly en-

gaged in this work were needed. However, none of the 34 redundant workers were discharged—they were transferred to another shop. Meanwhile, the six men who are operating the automatic line are no longer simply workers. They attended special courses where they learned a new trade, that of adjuster. One of them, cutting lathe operator Pyotr Kangro, was earning 900 rubles a month, but now his wage has risen to 1,500 rubles a month. Many examples of this kind could be drawn from quite a few Soviet enterprises.

The combined efforts of scientists and innovators in production are leading to the solution of many important technical problems.

In the post-war period, an outstanding achievement of Soviet science was the discovery of methods of producing atomic energy and utilizing it for peaceful purposes. It is now three years since the world's first industrial atomic power station (capacity—5,000 kilowatts) was commissioned in the U.S.S.R.

This station consumes about 30 grams of uranium every day. A thermal power station of the same capacity would need 100 tons of coal a day. The heat produced by the fission of the uranium nuclei is transmitted to water which carries it along pipes into a steam generator. From there the steam goes into an ordinary turbine and sets it in motion.

In its first year, the atomic power station generated about 15 million kilowatt-hours of electricity. This energy is fed to a high-tension ring from where together with the electricity produced by ordinary power stations it is carried to towns and villages.

Work on the first atomic power station has given scientists the necessary technical experience to build bigger

plants, found the necessary industry and train personnel. The day is not distant when other atomic power stations will be operating in the Soviet Union. In the sixth five-year plan period their total capacity will reach 2-2.5 million kilowatts.

However, power stations are not the only way of using atomic energy for peaceful purposes.

Thanks to the harnessing of atomic energy it has become possible to separate radioactive isotopes of various chemical elements. These isotopes are being used in metallurgy, the food industry, medicine, agriculture and other branches of the national economy.

Radioactive isotopes of iron help to study the processes of melting metal. In machine-building radioactive isotopes are used to examine the wear of machines and cutting tools. The textile industry has apparatuses with radioactive thallium for measuring the density of textile fabrics and for determining the weight of dyes.

As in factories throughout the country, many of the enterprises in Riga are employing radioactive isotopes on a growing scale. The peaceful atom is working at the VEF electro-technical works in signal and control instruments, and at the ship-building yard, where it helps to check the quality of welding. Radioactive isotopes are also used at the Dzintars Perfumery to control the weighing and packing of the products.

Medicine is using radioactive isotopes of sodium, iodine, phosphorus, cobalt, carbon, bromine and other elements. Some help to diagnose diseases and others—to treat them. Isotopes of cobalt, for example, are effective against cancer.

An exhibition of the achievements of different countries was opened in Geneva, in August 1955, while the

International Scientific and Technical Conference on the Peaceful Uses of Atomic Power was in session. "At this exhibition," wrote the Swedish *Morgon-Tidningen*, "the Russians showed some sensational discoveries.... Scientists were struck with wonder when they entered the Russian hall and saw the tastefully arranged exhibits showing atomic equipment for generating electric power, treating cancer, automatic control at iron and steel works, and even apparatuses for counting beer bottles."

The U.S.S.R. and other socialist countries have pooled their efforts in nuclear research. A United Institute of Nuclear Research was founded in Moscow in March 1956. Twelve countries are members of this institute and it is open to any other country wishing to join it.

The Soviet Government has turned over to it the Institute of Nuclear Problems of the Academy of Sciences of the U.S.S.R. with a synchrocyclotron with 680 million electronvolt protons and the U.S.S.R. Academy of Sciences' Electrophysical Laboratory with a synchrophasotron with 10,000 million electronvolt protons.

Soviet scientists are working on problems whose solution will have a tremendous bearing on the further development of industry. They have made an important contribution to the theory and application of semi-conductors. In collaboration with engineers, they seek to reduce the operational costs of thermal power stations. Considerable success has been scored in transmitting electric power over long distances. The transmission line carrying electricity from the Kuibyshev Hydropower Station to Moscow (nearly 620 miles) has a tension of 400,000 volts. The problem of an electric transmission line over a distance of 1,200 miles is on the order of the day.

In the U.S.S.R., science and engineering have many accomplishments to their credit, but Soviet people are looking ahead. Reflecting the interests of the people, the 20th Congress of the Communist Party has set far-reaching tasks before engineers, technicians and scientists, calling upon them to create new, highly productive machines, solve urgent theoretical problems, and map new paths for technical progress. That is an important condition for the further growth of this country's industrial might.

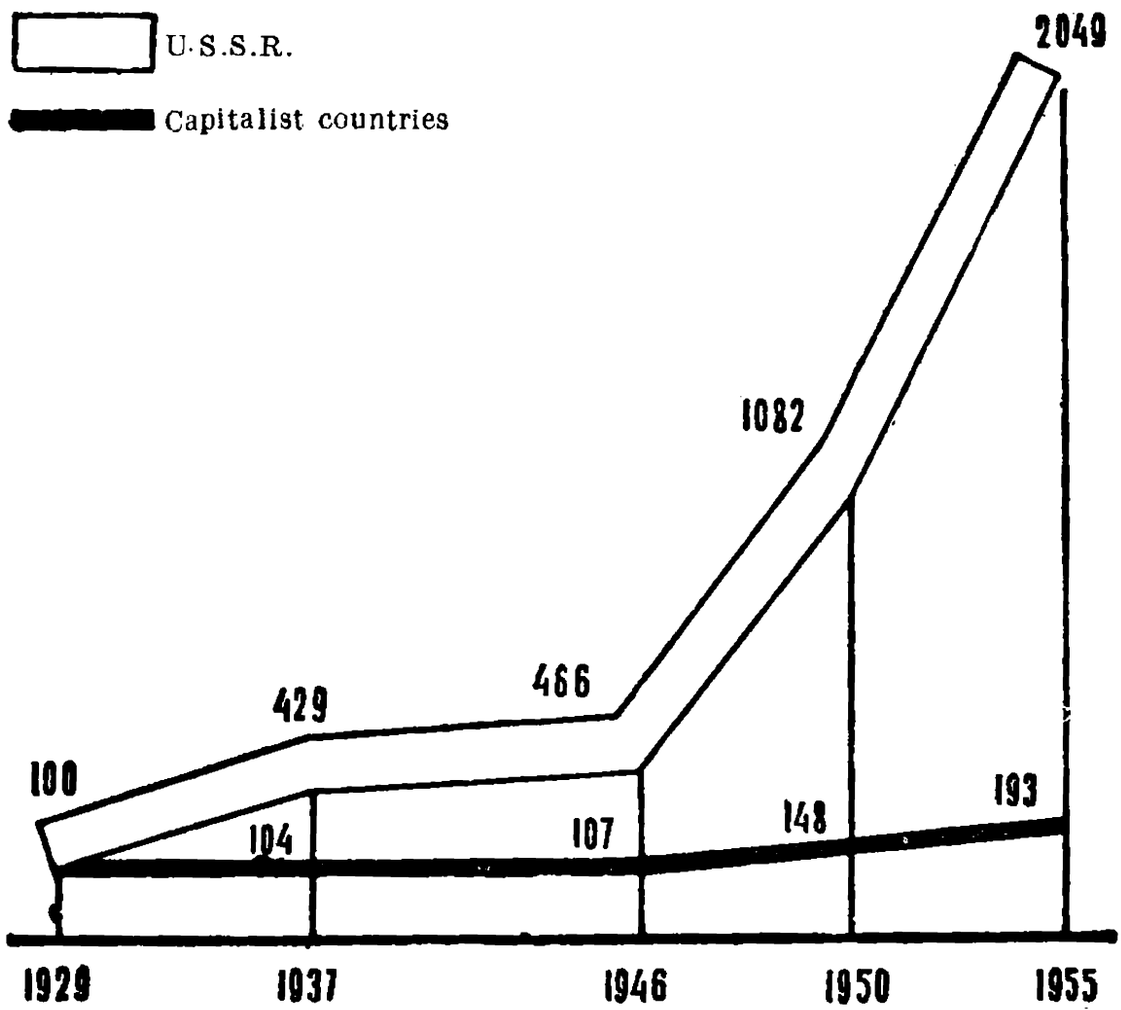
NEW TASKS

Thirty-seven years ago, when the Soviet Union was just embarking upon peaceful construction, Lenin, assisted by a group of scientists, drew up the country's first national economic plan. It was a plan of electrification, which envisaged building a large machine industry based on advanced modern technique—the technique of electricity. Abroad, the plan for the electrification of Russia was regarded as a castle in the air. H. G. Wells, the famous English novelist, who visited Russia in the autumn of 1920 and spoke to Lenin, wrote: " ... Lenin, who like a good orthodox Marxist denounces all 'Utopians,' has succumbed at last to a Utopia, the Utopia of the electricians. He is throwing all his weight into a scheme for the development of great power stations in Russia to serve whole provinces with light, with transport, and industrial power.... Can one imagine a more courageous project in a vast flat land of forests and illiterate peasants, with no water power, with no technical skill available, and with trade and industry at the last gasp?"

The author of many thrilling scientific romances and novels, Wells could not picture Russia as a country of

electricity and engineering. He held that such a picture could be conjured up only with the help of a very rich imagination.

That is what many foreigners thought.



Rates of growth of industrial output in the U.S.S.R. and in capitalist countries (per cent)

Today, when the plan of electrification has long been fulfilled and the U.S.S.R. has become a leading industrial power, the great effort of the Soviet people stands in full view of the entire world.

Here are a few convincing figures showing the growth of Soviet industry. What took the country a whole year to produce in 1920 was produced in 1955: electric power—

in one day; pig iron—in a day and a half; coal—in eight days; oil—in 20 days; sugar—in seven days.

The 1913 gross output of all branches of industry was increased 30 times by 1956.

This progress in industrial development would have been incomparably greater had the Soviet people not had to repel foreign invaders. Suffice it to remember that of the 40 years of Soviet rule, the country had only 22 years of peaceful development. The other 18 years were spent by the Soviet people fighting wars foisted on them or recovering from the ravages of war.

Soviet industry owes its high level of development chiefly to the steady and rapid growth of labour productivity. Though the working day was shorter, the mean annual labour productivity of workers in Soviet industry was eight times higher in 1955 than in 1913.

In the post-war years, labour productivity in industry rose 2.3 times above the 1940 level, while in construction and the railway transport it was two times above that level. In the fifth five-year plan period, increased labour productivity accounted for two-thirds of the increase in industrial output!

The explanation for this swift development is that the socialist system of the Soviet national economy offers inexhaustible reserves and opportunities for an exceptionally rapid growth of output and labour productivity. First and foremost, this is manifested by technical progress, broad dissemination of the experience of leading enterprises and of production innovators, better labour organization, effective ways of utilizing production capacities, and rational employment of new machines.

Soviet industry is now faced with bigger tasks than ever before.

In the course of the sixth five-year plan period, the volume of industrial output is scheduled to grow by approximately 65 per cent. This includes a 70 per cent rise in the output of the means of production and a 60 per cent increase in the output of consumer goods. Fulfilment of the new five-year plan will raise the level of industrial output more than five times compared with 1940. The conditions for this plan's fulfilment have been created.

The Soviet Union now has all the opportunities of rapidly carrying out its basic economic task of catching up with and surpassing the leading Western states in per capita output. It is seeking to achieve this goal in peaceful economic competition.

The fact of the matter is that in spite of the fast development of its productive forces, the Soviet Union is still lagging behind the chief capitalist countries in per capita output chiefly because of industrial and technical backwardness in the past and because of two destructive wars.

The reason why this country is out to catch up with and surpass the leading capitalist states in per capita output is that in fulfilling this task, a task of building up a powerful material and technical base of communism, it will be able better to satisfy the needs of the population and create the necessary abundance of material blessings that will allow distributing them according to requirements.

The rate of growth of per capita output is many times faster in the Soviet Union than in the chief capitalist countries. In the period between 1913 and 1955, per capita output grew 19.4 times in the U.S.S.R., 2.3 times in the U.S.A., 1.6 times in Britain and 1.8 times in France. In 1955, the per capita steel output in the Soviet Union was 7.5 times greater than in 1913; in the U.S.A. it

was 2 times, in Britain—2.3 times, in France—1.7 times, and in West Germany—1.9 times greater.

In the 1913-55 period, the per capita output of consumer goods increased 7.6 times in the Soviet Union and only 1.5 times in the U.S.A.

It goes without saying that the Soviet people still have to exert a great effort and to overcome quite a few difficulties before they will catch up with and surpass the chief capitalist countries in per capita output. However, people in this country are confident that this task will be carried out in the shortest historical period, for the Soviet Union has all the necessary material and technical means and a huge army of well-trained cadres. The U.S.S.R. is tackling its main economic task in a period when it is no longer the only socialist country competing with the capitalist world, but when two world systems—capitalism and socialism—are competing economically and when the great commonwealth of socialist countries is becoming stronger and developing.

The industrial might of the U.S.S.R. is growing and is undeviatingly serving the cause of peace, the cause of friendship and co-operation among nations.

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AGRICULTURE

In a comparatively short space of time the Soviet Union developed a large-scale agriculture equipped with modern machines and resting on the achievements of science.

The significance of this fact will be better understood and appreciated if we recall what this country's agriculture was like in the recent past.

Tsarist Russia was a backward agrarian country, where five-sixths of the population were engaged in agriculture. The natural conditions favoured farming and animal-breeding, but millions of peasants lived from hand to mouth. In 1908, a document of the Ministry of the Interior pointed out: "Every year starvation may quite probably be the lot of a considerable number of peasants in Russia."

The principal reason for this was that right until the establishment of Soviet rule, landlord ownership predominated. Thirty thousand big landlords had 189 million acres of land, as much as was owned by 10 million peasant holdings.

Landlord oppression and numerous dues and taxes pauperized the peasantry. Out of every 100 peasant households, 65 were poor. The land was cultivated with primitive implements: the wooden plough and the wooden harrow. Peasants could not afford to use machines and mineral fertilizers. Harvests were small. Poverty held the countryside in a fast grip.

Soviet rule put an end to landlordism. The land, its treasures, the forests and water became the property of the state, the property of the people.

The Soviet Government turned over to the peasants more than 405 million acres of land that had been in the hands of the landlords, the treasury and the monasteries. The peasants were freed from the heavy rents that had been exacted by the landlords, and from the expense of purchasing land. This amounted to 700 million rubles in gold annually. All the debts of the peasants to the agricultural bank were cancelled.

The position of the poor peasantry was fundamentally changed. They received not only land but also a considerable part of the landlord livestock and implements. The number of poor peasant households began to drop rapidly and that of middle peasant households—to rise.

In consolidating the alliance between workers and peasants, the Soviet Government gave the countryside all-out assistance—credits, machines, seeds, pedigree livestock, and consultations by agronomists. All this contributed towards the rehabilitation and strengthening of agriculture which declined completely during the First World War and the following Civil War and foreign intervention.

SOCIALIST REORGANIZATION OF AGRICULTURE

Towards the close of 1927, after agriculture was restored from ruin, the Soviet people were faced with the problem of further developing the countryside. Although the working peasantry received land and had the overall support of the Government, agriculture could not shake

off its backwardness. Petty, parcelled out, individual peasant holdings were in the majority. There were nearly 25 million such holdings throughout the country. Advanced agrotechnique and machinery could not be employed on the fields of these small farms and that meant that it was impossible to ensure any substantial increase in agricultural output. Petty farming could not meet the growing demand for food-stuffs and for industrial raw materials.

The only way out of this situation was to replace these small peasant holdings by large, highly productive farms, which would be able to make the widest use of machines and the achievements of advanced agronomy and thus considerably increase the output of marketable produce.

Large-scale agriculture can be either capitalist or socialist. The capitalist way of development, as history has shown, spells ruin for the main mass of the peasantry and their conversion into farm-hands. On the other hand, the socialist way makes it possible to bury backwardness and need. Naturally, the Soviet peasantry chose the socialist way, which was blazed for it by the Communist Party and the Soviet Government.

The plan of voluntary amalgamation into producers' co-operatives was worked out by Lenin. Its essence was that a large industry capable of mechanizing and electrifying agriculture should be used as a basis on which to get the peasant masses to help in socialist construction by drawing them into co-operatives.

Co-operation is a voluntary union of peasants for joint labour. Its lowest stage is the union of peasants for the sale of products (supply and marketing co-operatives); its highest stage is the union of peasants

not only for the sale of produce but for joint production (field work, livestock-breeding, etc.). All the profits from co-operation go to the peasants. They manage their economy themselves, do without middlemen in the sale of their produce, and dispose of their incomes themselves.

In the Soviet Union, the highest form of co-operation took the shape of collective farming. For the peasantry, co-operation (at first marketing, consumers', and then producers') was the easiest and most understandable way of passing from individual to large-scale social farming.

The peasants did not join the collective-farm movement at once. It was something new and unprecedented. For centuries they had been used to tilling their own tiny patch of land, while here they were faced with the problem of working together, collectively. Some people were afraid that nothing would come of collective farming. The village rich, or kulaks, intimidated the peasants, spread the wildest lies and even used violence against the politically-conscious peasants who stood for collective farms and were their organizers.

The Soviet Government and the Communist Party carried on explanatory work among the peasantry, helped them to organize collective farms and took resolute measures against the underhand plotting of the kulaks. As industry developed, tractors and other machines appeared in the state farms and first collective farms. In combination with scientific methods of farming this led to bigger harvests and greater livestock productivity. That clearly showed the peasants the advantages of collective, mechanized land cultivation, and they voluntarily began to unite in collective farms. The example

of the first peasant families that joined the collective farms was soon taken up by entire villages and districts.

Collectivization began to triumph. In 1918, the country had something like 1,600 peasant producers' co-operatives, but in 1925 that figure jumped to 22,000, and in 1928—to 33,300. In 1929, the main body of the Soviet peasantry determinedly took the road towards collectivization. The kulaks, who were furiously trying to halt this progressive movement of millions of peasants, were swept off the road and liquidated as a class. Agriculture was placed on a socialist footing.

The decisive condition for collectivization was the creation of a large industry which began to supply the new, socialist farms with tractors, harvester-combines, fuel, electric motors, and mineral fertilizers. There were no tractors in Russia in 1913, but by 1932, the country had 148,000 of these machines. The U.S.S.R. found itself in a position completely to stop importing tractors. The Soviet Government set up thousands of machine and tractor stations to serve the collective farms.

The working class did more than provide the working peasantry with agricultural machines. In 1930, twenty-five thousand advanced workers voluntarily went to the countryside and helped the peasants to organize collective farms.

Collectivization was completed towards the end of the second five-year plan period (1937). The collective farms were joined by 93 per cent of the peasant households in the country. That year, the collective farms (without the state farms) gave the country over 27 million tons of marketable grain or 6,400,000 tons more than was produced in Russia in 1913. That was a great triumph of the new system in the countryside.

In 1937, there were nearly 456,000 tractors working on collective- and state-farm fields.

Thus, through the heroic efforts of the Soviet people the basis of large-scale socialist production was rapidly created not only in towns but in the countryside as well. Agriculture forged ahead swiftly. In the period between 1932 and 1937, total output increased from 13,000 million to 20,000 million rubles. In other words, the mean volume of agricultural produce annually rose by more than 10 per cent.

The victory of the collective-farm system created the conditions for a new, prosperous life. After they joined the collective farms tens of millions of poor peasants became well-to-do people. In 1940, the real incomes of he peasants were approximately 3.5 times greater than in 1913. Poverty and lack of culture became things of the past.

The vitality of the collective-farm system was demonstrated with particular force in the grim years of the war of the Soviet people against the Hitlerite invaders. Collective and state farms uninterruptedly supplied the front and the rear with food, and the industry with raw materials. That was done at a time when millions of collective farmers were called to the colours and the major grain areas were occupied by the enemy.

The German-fascist invaders inflicted tremendous losses upon Soviet agriculture. They looted and destroyed 98,000 collective farms, 1,876 state farms, and 2,890 machine and tractor stations. They slaughtered or drove away 17 million head of cattle, seven million horses, and tens of millions of head of sheep and pigs. The invaders ompletely or partially destroyed more than 70,000 villages. Hundreds of thousands of people were shot, tortured to death or driven into slavery.

This barbarity of the enemy made the task of rehabilitating socialist agriculture extremely complicated. The difficulties engendered by the war were aggravated in 1946 by the worst drought in 50 years that hit many regions. There can be no doubt that under the system of private property these difficulties would have led to the ruin of the peasantry and to a general decline in agriculture. That did not happen to the collective-farm peasantry. The collective-farm system ensured the restoration and further growth of agricultural production, once again demonstrating its vitality.

Soviet agriculture is a system of large, highly productive economies: state farms, collective farms and machine and tractor stations.*

STATE FARMS

State farms are large, state agricultural enterprises producing grain, meat, milk, cotton, wool, vegetables and fruit. They are the highest form of mechanized agriculture putting out huge quantities of marketable products. The first state farms were established soon after the October Revolution on former landlord estates and on unused state land.

State farms helped to turn the peasantry towards collectivization. Many individual farmers visited the state farms to see for themselves what advantages machines offer and to learn how to organize large-scale social farming. For instance, in the course of three years (1929-31), the Gigant State Grain Farm was visited by more than 120,000 peasant delegates. During the

* In 1955, there were more than 100,000 individual peasant households in the Soviet Union.

years of the pre-war five-year plans, state farms rendered collective farmers a large measure of assistance by providing them with high-grade seeds, pedigree livestock, and so forth.

There are more than 5,000 state farms in the U.S.S.R. They have a total of about 300 million acres of land and are equipped with a great number of the most diverse machines. In the leading state farms, mechanization covers all branches of agriculture. Each state farm is managed by a director appointed by the state.

In 1956, state farms had a total of 80,000,000 acres under crops. By the beginning of that year they had 257,000 tractors (in terms of 15-h.p. units), 63,000 harvester-combines (in terms of 15-foot units), 69,000 lorries, and many other machines. At the same time, in these farms there were more than 3,700,000 head of cattle, over 5 million pigs, and nearly 12 million sheep.

These enterprises concentrate on various branches of agriculture such as grain, livestock-breeding, cotton, sugar-beet, flax, vegetables, vine-growing, etc. However, that does not mean that other branches of agriculture are neglected. For example, in addition to land cultivation, each state farm breeds livestock and, side by side with the plant it specializes in, grows auxiliary, additional crops. That enables it to make the fullest use of its land, machines and labour power.

The basic production unit in a state farm is the permanent tractor-field team (which is allotted land, machines, and other means of production) or a permanent livestock-breeding team.

State-farm workers are paid on the same basis as workers at factories and plants: they receive a wage which corresponds to their labour. Overfulfilment of

the work norms is encouraged by extra pay. Tractor drivers, for example, receive a bonus for every acre cultivated over and above the yearly norm, for high-quality work, and so on. In the state grain farms, these bonuses amount to 20-30 per cent of the total earnings of the tractor drivers.

To give a clearer picture of what a state farm is like, let us cite the Kuban State Seed Farm (Gulkevichi District, Krasnodar Territory) as an example. It has 44,213 acres of land, of which more than 30,000 acres is ploughland. There are extensive fields under wheat, maize and sunflower, and huge orchards and vineyards. The farm's livestock consists of nearly 1,500 head of cattle, more than 2,000 pigs and about 4,000 head of sheep. Besides, there is a large number of poultry.

Almost all the work is done with the help of machines. In 1955, the farm had 60 tractors, 29 harvester-combines, 30 lorries.The work-shops are equipped with new machine-tools. On the central estate there is a 1,100-kilowatt power station, which generates electricity for a grain elevator, flour-mills, machine shops, farm buildings and dwelling-houses.

The Kuban is famous for its harvests. In 1956, it took in an average of 44 bushels of winter wheat and 51 bushels of maize per acre. The cost of producing a bushel of grain was about 4 rubles. In the past six years, this state farm has been systematically growing bumper crops of corn—the winter wheat harvest was never below 28 bushels per acre.

"Town in the steppe" is what the Kuban is frequently called. It has thousands of workers and other employees, all of whom earn good wages and live in town-type houses with modern conveniences and with plenty of

greenery around them. There is a club, a library, a cinema and a recreation park. The hospital has four departments (therapeutic, surgical, maternity, and infectious diseases), a pharmacy and an out-patient clinic.

The country's leading state farms each deliver 16,000-24,000 tons of grain to the state. Some deliver even more than that. Many of them, such as the Karavayevo State Farm, have developed into nurseries of highly productive livestock. The Marfino State Farm, which supplies Moscow with vegetables, is well known as a very productive enterprise.

State farms occupy a major and increasingly important place in Soviet agriculture. In 1954-56, 425 big state farms were set up in the virgin and fallow land areas (altogether, 581 new state farms were organized in the country in that period). The economic expediency and profitableness of running such farms has been shown in practice. In spite of the unfavourable weather conditions that prevailed in 1955, the Tyup State Farm, Krasnoyarsk Territory, delivered 36,800 tons of grain to the state. The cost of producing this grain was only 7 rubles per bushel.

One of the new enterprises, the Zheleznodorozhny State Farm, Kustanai Region, was set up at a cost of 22 million rubles, but already in 1956 it delivered more than 64,000 tons of grain to the state, receiving a net profit of 16 million rubles.

In 1956, state farms accounted for 17 per cent of the country's ploughland and for 27 per cent of the grain deliveries to the state, 15 per cent of the meat deliveries and 18 per cent of the milk deliveries.

COLLECTIVE FARMS

In the Soviet Union there are 87,500 collective farms, which are voluntary producers' associations of peasants. Under the Constitution of the U.S.S.R., land is secured to them free of charge and in perpetuity.

Collective farms are large enterprises. In 1955, each had an average of nearly 15,000 acres of land.

At their general meetings, collective farmers adopt the rules of their farm, in accordance with which only the principal means of production—tools, draught animals, seed reserves, large buildings—are socialized. To join a collective farm, a householder pays an entrance fee of 20-40 rubles.

The members of a collective farm receive their main income from the commonly-owned economy. Individual auxiliary husbandries are an additional source of income. Each collective-farm household has a plot of land, which varies in size from 0.5 to 1.25 acres, while in some regions it is up to 2.5 acres. The size of these plots is fixed at meetings of collective farmers with account of the contribution made by the members of the commonly-owned economy.

Dwelling-houses, livestock and poultry, and minor tools and implements remain the property of the collective farmers. Under the Model Rules of the Agricultural Artel, each household in the grain, cotton, sugar-beet, flax, hemp, potato-vegetable, tea, and tobacco areas may own a cow, two head of young cattle, one or two sows with the litters, up to 10 goats and sheep, an unlimited number of poultry and rabbits, and an apiary of up to 20 hives.

The socialized means of production make up what is called the indivisible fund of the collective farm and include implements of labour, draught, meat and dairy livestock, buildings, means of transport, and cash. This fund also embraces the collective-farm clubs, reading-rooms, kindergartens and crèches.

Annually, 15-20 per cent of the farms' cash incomes are deducted to complement the indivisible funds, whose growth is regarded by the collective farmers as a major condition of economic development. In 1955, investments in collective farms amounted to approximately 18,000 million rubles, which is a long step forward from the period of the First Five-Year Plan (1928-32), when they were no more than 1,100 million rubles. The collective-farm indivisible funds totalled 87,600 million rubles in 1955.

The affairs of the collective farms are managed by the members themselves. The general meetings elect chairmen and boards as well as auditing commissions. Experienced, conscientious workers, most of whom have a higher or secondary school agricultural education, are elected as chairmen. The general meetings examine and approve the annual production plans, the income and expenditure estimates, the amount of products and money to be paid against workday units, the order in which this payment is to be made, and so forth.

The size of the income depends on the amount of work they put in.

Seeing that not everyone puts in an equal amount of work, how, one may ask, is the work of a collective farmer estimated and how is he paid for it? Long years of practice enabled the collective farms to work out a method of payment against workday units. A workday

unit is a measure of labour spent by the collective farmer in collective work; it determines his share of the collective-farm income; the part of the income that goes to the collective farmers is shared out among them against workday units.

The general meeting fixes the daily work norms, and the rate paid against workday units is determined in accordance with these norms. Fulfilment of the daily norm on comparatively easy field work is estimated at one workday unit. All other work is estimated below or above that. Consequently, in the course of one working-day a collective farmer may earn one workday unit, a portion of a workday unit or a few workday units in conformity with the kind of work and the degree of fulfilment or overfulfilment of the work norm. The system of workday units provides equal pay for men and women. At least once a week, team-leaders calculate the work done by the members of their teams and write the number of earned workday units in their work-books. Payment is made at the end of the year.

The payment in cash and kind received by the collective farmers depends on the level of development attained by their collective farm and on the results of its work.

The collective farm owns the products it puts out. Part of these products is sold to the state at fixed procurement and purchasing prices. After making their obligatory deliveries to the state and paying the machine and tractor station for its services, the members of the collective farm dispose of the farm's produce and incomes at their own discretion.

In order to increase the cash funds of the collective farm, surplus products are, by decision of the general

meeting, sold to consumers' co-operatives and in the collective-farm market. Part of the proceeds from these sales are shared out against workday units.

Collective farmers who overfulfil the planned targets of their farm receive additional payment in cash and in kind.

In the course of the year, collective farmers receive advance cash payments against their workday units. The practice of advance payments is widespread. By decision of general meetings, collective farms began paying their members monthly cash advances for the work they do. These advances amount to a quarter of the cash incomes actually received from all branches of the commonly-owned economy and up to half of the money received in the form of advances against contracts, purchases and obligatory deliveries of agricultural produce.

Pensions are paid in many of the collective farms. For instance, in the 19th Party Congress Collective Farm, Kashira District, Moscow Region, a general meeting fixed the following order of paying pensions to aged collective farmers. Members of the farm—men reaching the age of 60 and after not less than 30 years' service, and women reaching the age of 55 and after not less than 25 years' service—receive a full pension of 30 per cent of their annual earnings against workday units in the last five years but not less than 50 and not over 100 workday units per year. For men and women who have brought up three and more children, the pension age is five years lower.

Similar rules obtain in many other collective farms.

Chairmen of collective farms and specialists (agronomists, livestock experts) are paid according to a fixed number of workday units. Furthermore, they receive

additional payments which depend on the size of the collective farm and on its annual income.

For example, by decision of a general meeting, F. Moskalenko, agronomist at a collective farm in Krasnodar Territory, receives 10 per cent less the number of workday units fixed for the chairman of the board. His earnings in 1954 amounted to three tons of grain, 66 pounds of butter, one ton of vegetables, and 15,680 rubles in cash. Translated into terms of money, this means that he was paid 1,800 rubles a month. In 1955, as a result of a further growth of the incomes of the collective farm and of its members, his earnings were doubled. Another source of his income is a vegetable garden and an orchard.

It would be incorrect to state that all collective farms in the Soviet Union are advanced and receive high incomes. Unfortunately there are backward farms. However, every collective farm is ensured with conditions for rapid development.

The following is a short description of one of the numerous collective farms in the U.S.S.R.

It is the Dawn Collective Farm (Byelorussia), a developed many-branched economy. Uniting more than 1,200 households, it has 22,230 acres of land. The members had to work hard before they began to receive high cash incomes from land cultivation and animal husbandry and from the sale of vegetables and fruit. It was difficult to farm on poor podzol sandy soil. Large quantities of organic fertilizers made the soil more fertile with the result that the harvest yield began to increase sharply.

For ten years now, after long, dogged labour, the farm has been bringing in bumper crops of potatoes. In 1955, unfavourable weather notwithstanding, the farm

harvested an average of 6.4 tons of potatoes per acre over an area of 2,223 acres, while on peat soil the crop was 12.1 tons per acre. The collective farm received an income of more than a million rubles from the sale of potatoes alone. Flax-growing yielded 7,500,000 rubles.

Compared with 1955, output of grain increased by almost 500 tons in 1956, while the output of potatoes—by 2,900 tons. A good harvest of flax was gathered. The farm delivered or sold to the state more than 2,000 tons of milk or almost twice as much as in 1955. The total income exceeded 15,500,000 rubles.

Rich harvests enable the farm to pay its members well for their labour. In 1955, a workday unit at this farm was worth 6.6 pounds of grain, 22 pounds of potatoes, 2.2 pounds of vegetables, and 30 rubles in cash. That year, the family of N. Dudchenko, which consists of four working adults, earned 1,450 workday units, against which it received 4.48 tons of grain, 14 tons of potatoes, 1.44 tons of vegetables, and 43,500 rubles in cash. At the farm quite a few families earn as much.

The farm board consists of 29 persons. The chairman is Hero of the Soviet Union K. Orlovsky, an ex-partisan. The members of the board are people who directly manage collective-farm production—specialists in agriculture, team-leaders, section managers.

The income is such that every year the farm can allocate large sums of money for the construction of farm buildings and for purchasing equipment with which to mechanize and electrify production. In 1956, part of the farm's income was used to build a library, a telephone exchange, a bakery, a bath-house, and a public dining-room. Water piping is being laid in the village and the streets are being asphalted. With the assistance of

the collective farm, the members are building themselves new houses with conveniences.

Prosperity entered the homes of the collective farmers together with culture. Lectures on general educational and agronomical subjects are read at the club and films are screened regularly. There is a wireless set in every home.

In 1956, the collective farm built a new secondary school with a special 11th class, which trains collective-farm team-leaders and section managers.

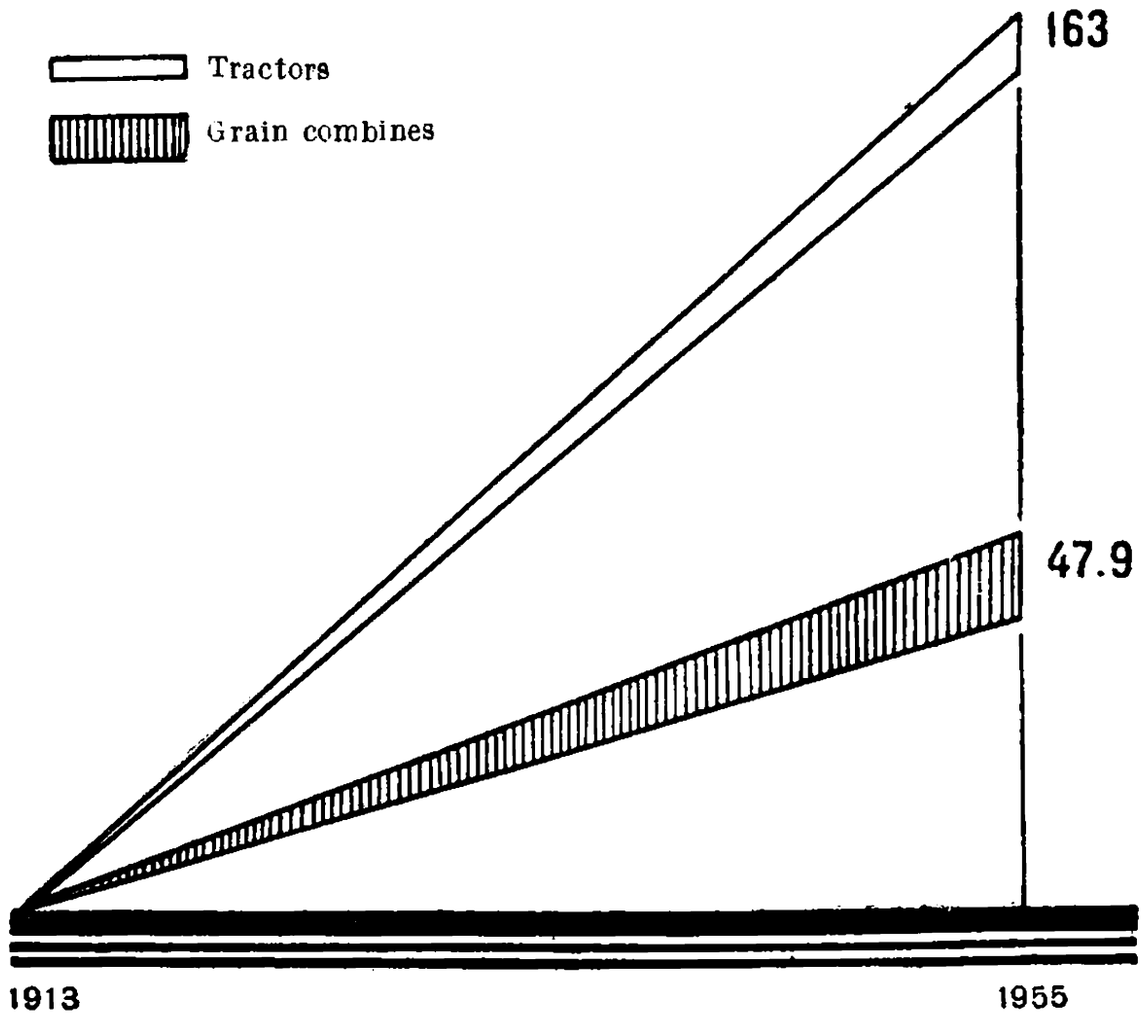
Like the Dawn Collective Farm of Byelorussia, thousands of collective farms throughout the Soviet Union have become highly developed, profitable enterprises. An illustration of this is that at the U.S.S.R. Agricultural Exhibition in 1955 and 1956 the exhibitors were not only individual collective and state farms and machine and tractor stations as was the case in 1954, but also entire regions, territories and republics. They were accorded that honour for their big harvests and for their successes in animal husbandry.

MACHINE AND TRACTOR STATIONS

Machine and tractor stations are state enterprises set up to help and serve collective farms. The enormous amount of machinery at these stations includes tractors, machines for cultivating soil, sowing, harvesting, draining and watering. Two million workers, engineers, technicians and agricultural specialists are on the staffs of these stations, which may be called the material and technical basis of collective-farm production.

The Soviet Union's first machine and tractor station was organized in 1928 at the Shevchenko State Farm,

Ukrainian S.S.R. Today, there are about 9,000 of these stations throughout the country. In 1930, they had 25,000 tractors (in terms of 15-h.p. units) and only seven harvester-combines, but by 1955 those figures jumped to 1,109,000 and 280,000 respectively.



Output of tractors and grain combines in the U.S.S.R.
(in thousands)

Machine and tractor stations serve the collective farms in their zone on the basis of contracts drawn up annually. These contracts provide for mutual obligations: for the services rendered by the machine and tractor stations, the collective farms pay the state in kind—grain, potatoes, vegetables. For some kinds of work payment is made in cash.

For its size and equipment, a modern machine and tractor station may be likened to a big industrial enterprise. It has 100-120 tractors, 30-40 harvester-combines, 20-30 lorries, work-shops, garages, an oil base, and a power station. On the average, the capacity of the machines at each machine and tractor station, which employs more than 200 machine operators, is over 5,000 h.p.

All the machines of a station are divided among teams of operators. As a rule, a collective farm is served by teams of five to eight tractor drivers in each.

Close co-operation in the work of machine and tractor stations and the collective farms is established by councils of machine and tractor stations. These councils consist of representatives of both the machine and tractor stations and the collective farms. They gather periodically to discuss the production plans of the collective farms and the way these plans are carried out.

The manner in which these stations help to promote agriculture may be shown on the example of the Medvedovskaya Machine and Tractor Station, Timashevskaya District, Krasnodar Territory.

The station serves three big collective farms. In 1955, it had two 135-kilowatt power stations, 128 tractors, 32 harvester-combines, and more than 500 other machines.

It performs over 100 different kinds of agricultural work. Mechanized crop tending alone yields an annual saving of over 50,000 workday units.

The excellent work done by this station ensures bumper harvests. In recent years, the average harvest at the collective farms it serves has been: winter wheat—

29 bushels per acre, hemp (stalks)—1.86 tons per acre, maize (grain)—35 bushels per acre.

With the help of the station, the collective farms have mechanized many labour-consuming processes in livestock-breeding. They have artesian wells, wind-motors and pumps, automatic watering troughs and feed-preparing machines. Sheep shearing is done mechanically and there are milking apparatuses. In the period between 1952 and 1954, gross milk output increased by more than 100,000 gallons.

Machine and tractor stations are centres of agronomical and zootechnical sciences. In 1955, there were 11 agronomists and six zootechnicians at the collective farms served by the Medvedovskaya Machine and Tractor Station. Guided by the station, they help the peasants to carry on their work on the basis of science and advanced experience.

The concentration at the machine and tractor stations, i. e., in the hands of the state, of tractors, harvester-combines and other machines is an extraordinarily favourable factor for the development of socialist agriculture. The fact is that machines never remain at one and the same level, but must be constantly improved. In recent years, hundreds of new kinds of intricate agricultural machines have been introduced into practice.

Nevertheless, fulfilment of the task of completely mechanizing all processes in agriculture, particularly in livestock-breeding, demands the creation of new, still better and more productive machines. That needs large investments which will be compensated only in the course of a number of years. Naturally, such expenditures cannot be borne by the collective farms, but they are with-

in the means of the Government, which is investing great sums of money in agriculture.

Thanks to machine and tractor stations, the collective farms are freed from having to purchase tractors and harvester-combines and from outlays for systematic replacement of machinery. Instead, they use that money to further their commonly-owned economy, to purchase pedigree livestock, to construct farm buildings, clubs and reading-rooms, and to increase the incomes of the peasants.

PLANNED ECONOMY

As the other branches of the Soviet national economy, agriculture is developing on the basis of a single state plan approved by the Government. The plan ensures strict co-ordination in the general development of agricultural production and of its branches. For example, development of livestock-breeding is closely linked with the advance of grain farming, since it is impossible to increase the number of livestock without making provision for a corresponding increase in the output of feeds. Growth of the output of cotton and sugar-beet depends, in particular, on the output of mineral fertilizers and on the supply to the corresponding regions of additional quantities of tractors, sugar-beet combines, and cotton-harvesters.

Let us examine briefly how a plan of agricultural development is drawn up. The Government only fixes the general volume of deliveries necessary to satisfy the country's requirements in food-stuffs and raw materials, and the volume of tractor work to be carried out by the machine and tractor stations in the collective farms. In conformity with the task set by the Government, each

collective and state farm and every machine and tractor station draw up their own plans of production and financial activities. These plans are drawn up for five years, for a year and for particular field work (spring sowing, tending crops, harvesting, etc.).

Thus, collective farmers and the workers of machine and tractor stations and state farms directly share in planning agricultural development. In accordance with the economic advantages and the obtaining natural and economic conditions, collective farmers and specialists together with machine and tractor station workers decide how best to use their land, what crops to grow and what livestock to breed.

The welfare of the collective farmers and of the whole of Soviet society depends on the successes of the commonly-owned economy of the collective farms. No wonder then that farmers regard the fulfilment of current and long-term plans of the collective farms as a responsible and vital task.

Mindful of the interests of the state, farmers are indefatigably seeking new reserves in drawing up and carrying out their production plans. This, too, yields remarkable results. The experience of leading farmers shows that in agriculture the tasks of the Sixth Five-Year Plan, which the nation is now engaged in, can be fulfilled ahead of time.

Planned agriculture helps to increase commodity output and rapidly to develop production. At the same time, it ensures the correct distribution and specialization of various branches of farming. Grain farming is developed in almost every region of the country (the Ukraine, North Caucasus, Volga country, South Urals, Siberia, Kazakhstan, and the central regions). The same

may be said about livestock-breeding. Flax is cultivated chiefly in the central non-chernozem belt (Gorky, Ivanovo, Kalinin, Pskov and Smolensk regions, and the Byelorussian S.S.R.). Sugar-beet is grown mainly in the Ukraine and in the central chernozem belt. Central Asia specializes in cotton-growing and karakul sheep-breeding. Cotton is also grown in Azerbaijan. Georgia cultivates citrus fruits, tea and tobacco. Vine-growing and fruit-gardening are highly developed in the Caucasus, the Transcaucasus and Moldavia. Collective farms situated around the big cities and industrial centres take account of the needs of the urban population and concentrate on the output of potatoes and other vegetables, and also milk.

The distribution and specialization of the various branches of agriculture are based on the fullest utilization of all the natural and economic resources of different regions. That is achieved through specialization in the regions where the leading branches of agriculture are rationally combined with certain other branches so as to make the fullest use of all local resources and correctly to organize agricultural production as a whole.

MACHINES IN AGRICULTURE

Soviet agriculture is based on a powerful heavy industry which is producing increasing numbers of tractors, harvester-combines and other agricultural machines. Soviet people have done away with technical backwardness, which was so characteristic of the country in the past.

In 1910, the countryside had 7,800,000 wooden ploughs and 4,200,000 iron ploughs. Forty-five years

later, there were 1,439,000 tractors (in terms of 15-h.p. units), 338,000 harvester-combines and 544,000 lorries serving collective and state farms.

More than 200 types of machines were introduced into agricultural production in the years of the Fifth Five-Year Plan alone. They included highly productive row-crop tractors. Machines for the square-pocket sowing of potatoes are widespread in the U.S.S.R. Soviet designers have produced maize-harvesters, potato-pickers, ensilage combines and cotton-harvesters which are used with great success. Electric tractors have made their appearance on collective-farm fields. Beginning with 1956, all types of tractors have been switched over to the more economical diesel engine.

The huge amount of machinery concentrated in the machine and tractor stations has made it possible completely to mechanize the most important kinds of field work (upturning fallow and ploughland, sowing, and harvesting corn). Prior to the war, the machine and tractor stations accounted for 90 agricultural processes, now they are doing more than 190 kinds of work.

The broad utilization of machinery in collective-farm production has raised labour productivity to a high level; compared with pre-revolutionary days, labour is now three times more productive. Machines are making the work of the peasants lighter. For example, each sugar-beet harvester does the work of 150-200 people. The potato-picker reduces manual labour five times. It has been calculated that in 1953 alone, tractors, harvester-combines and lorries did the work of 22 million people. The labour power freed by machines is being used in other branches of agriculture, as well as in industry and transport.

Soviet people are beginning to solve important tasks in rural electrification. In 1940, agriculture consumed 425 million kilowatt-hours of electricity. In 1956, power consumption by collective and state farms amounted to 3,000 million kilowatt-hours. In the period between 1946 and 1956, the capacity of rural power stations increased more than 10 times. To one degree or another, electricity is used by all machine and tractor stations, state farms and more than 40 per cent of the collective farms. In the leading collective and state farms electric power is utilized for many of the production processes.

For example, the Petrovskoye State Farm, Moscow Region, has 80 electric motors. It uses electricity for pumping water, for preparing feeds, for milking cows, and in its hothouses and work-shops.

At the Red October Collective Farm, Vozhgaly District, Kirov Region, electric power drives 59 different kinds of machines. It helps to supply water to the livestock sections, prepare feeds, clear away manure, milk cows, and thresh corn. The collective farm has its own sanatorium with water-cure and electric treatment rooms.

Mechanization has enabled the country to extend the area under grain. In 1913, there were 281,460,000 acres sown to crops; by 1956 this area was enlarged to nearly 481,650,000 acres. In the past three years (1954-56), the area under all crops has been increased by almost 94 million acres.

Land reclamation and irrigation are proceeding on a big scale in the U.S.S.R. In Soviet years the area of irrigated lands was more than doubled, while that of reclaimed lands was increased almost seven times.

Large irrigation systems were built and placed in operation in Central Asia, Kazakhstan, the Transcaucasus, North Caucasus and the Crimea already before the war. These were built very quickly. The construction of the 168-mile Great Ferghana Canal (it was later extended to 206 miles) was built in 45 days by 160,000 Uzbek and Tajik collective farmers. In tsarist days, a 19-mile canal in the Hungry Steppe took nearly 11 years to build. After the war, the construction of irrigation networks in these areas as well as in the central chernozem and other regions has been proceeding on an unprecedented scale thanks to powerful machinery and the latest achievements of science.

In 1955, more than 800 irrigation systems, which annually divert 988,400 million cubic feet of water from rivers, were built in Uzbekistan alone. The total length of Uzbekistan's canals exceeds 100,000 miles.

Work to reclaim huge areas has been started in the post-war years. Special machines and tools were created for this purpose. Swamps are being reclaimed in Byelorussia and in the Ukraine (primarily in the Polesie lowlands), in the Baltic republics, the northwestern and central regions of the Russian Federation, West Siberia (Barabinskaya Steppe), and other regions. Extensive though it is, there are great opportunities for promoting this work still further. Suffice it to say that to date not even a tenth of the country's marshlands are used.

Socialist agriculture is rapidly enlarging its technical base. In 1951-55 alone, collective farms, machine and tractor stations and state farms received 824,000 tractors (in terms of 15-h.p. units), 217,000 harvester-combines, 410,000 lorries, and many other

machines. The level of technical development that has been attained shows that the day is not distant when the overall mechanization of agricultural production, including livestock-breeding, will be completed.

THE MAIN BRANCHES OF AGRICULTURE

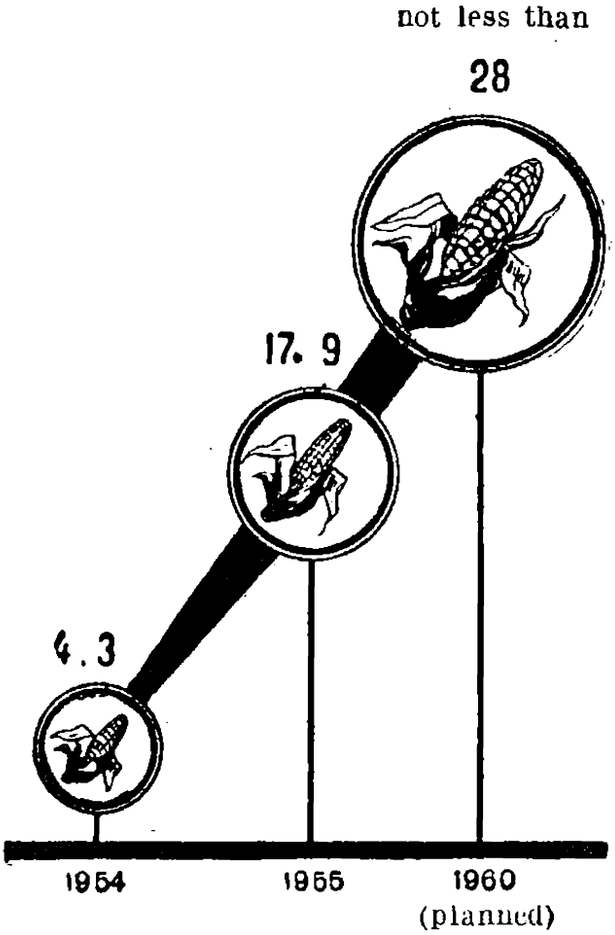
Wheat, rye and maize are some of the grain crops sown in the Soviet Union. In 1955 the area under grain crops totalled 312,208,000 acres, having increased by nearly 59,280,000 acres since 1950. Thanks to progress in industry and collective farming many regions have become grain producers. The acreage under wheat has expanded in those regions more than eight times over in comparison with the pre-revolutionary period. Millions of acres of wasteland have been put to use, and marshland covering many thousands of acres has been reclaimed.

In Soviet years new vast grain-producing areas were added to the old ones in the South. They are the Volga country, Siberia, Altai and above all Kazakhstan, which has become a major granary comparable to the Ukraine owing to the cultivation of new land.

153 million acres were sown to wheat in 1956 and its share in the total area under cereal crops was 48.3 per cent. The Soviet Union is the greatest producer of wheat in the world. While in 1926-27 it supplied 10, 300,000 metric tons of marketable grain, in 1956 it supplied roughly 52,800,000 metric tons.

Much attention is being paid to maize, which in 1956 took up more than 59 million acres, or an area seven times as large as in 1953. Experience has shown that rich crops of maize can be raised in many regions of the Soviet Union.

The Ukrainian collective farmer Mark Ozerny, a Hero of Socialist Labour, raises not less than 283 bushels of maize per acre. He has evolved a highly productive variety known as Partizanka; its cob weighs up to a pound and its height ranges between 106.4 and 118.2 inches. The Ukrainian collective farmers Maria Gabovda, Yevgenia Dolinyuk and many others harvest from 283 to 311.3 bushels of maize to the acre.



Expansion of the area under maize (in million hectares*)

Old Russia's own supply of cotton was limited and she had to import more than half the amount she required. Today the Soviet Union fully meets the textile industry's demand for cotton. New cotton-growing areas have come into being in addition to the old ones in Central Asia and in Azerbaijan.

The Soviet Union is unexcelled in productivity and quality of cotton. In 1913 Russia produced a mere 720,000 metric tons of cotton. In 1956 Uzbekistan alone supplied more than 2,800,000 tons of raw cotton, an amount unprecedented in her history. She produces as much cotton as do Brazil, Pakistan, Turkey and Iran put together.

* 1 hectare=2.47 acres.—*Ed.*

Many Central Asia collective farms have achieved signal results in cotton-growing. One of the best-known cotton-growers is Hamrakul Tursunkulov, thrice Hero of Socialist Labour. The collective farm in Uzbekistan, which he has headed for more than 20 years, is among the republic's foremost. It was the first to sow cotton by the square-pocket method, now widely used, and to utilize other progressive methods. In 1956 it harvested 1.5 metric tons of cotton from each of its 4,060 acres sown to that crop. The total income of the collective farm reached 20 million rubles.

A great deal is being done to extend the use of machinery in cotton-growing. The production of high-capacity cotton-pickers has been growing since 1948; in 1955 there were some 25,000 pickers at work in the fields. Soviet designers have created machines for the cultivation of cotton sown in narrow rows by the square-pocket method, something which makes it possible to fully mechanize all operations involved in cultivation, reduce labour expenditure to 50 or 30 per cent and considerably increase the gross yield. Square-pocket drills are turned out in large quantities. Rotating hoes and mounted cultivators with devices for the introduction of fertilizers are likewise used.

New tracts are being sown to cotton in Central Asia. A government decree provides for the irrigation and cultivation, between 1956 and 1962, of Hungry Steppe (in the Uzbek and Kazakh republics) on an area totalling 741,000 acres. A yearly minimum of 320-340 thousand metric tons of raw cotton is to be grown there. Two new canals will be built and the existing Kirov Canal will be reconstructed. Hungry Steppe will supply not only cotton but also fruit, wool, meat and milk.

The Soviet Union accounts for nearly 45 per cent of the world's acreage under sugar-beet.

There was a time when sugar-beet for industrial use was sown only in the Ukraine and the central chernozem regions. Today beet-growing is developing in Byelorussia, the Baltic republics, the Volga country, Siberia, the Far East, Central Asia and Kazakhstan.

Beet-growers use new high-capacity harvesters, feeder-cultivators, combined drills, etc. Ninety-six per cent of the sowing is done by machinery. Much greater use is made of mineral fertilizers, as well as of chemical pest-killers and means of combating diseases of the plant.

The first high yields of sugar-beet date from 1935 when the collective farmers M. Demchenko, M. Gnatenko and others raised upwards of 44,534 pounds of beet per acre. By now this figure has been exceeded. After the war M. Geta, a woman worker of the Krasnoarmeisky State Farm in the Ukraine, raised 91,473 pounds to the acre on an area of 18.5 acres.

The Soviet Union is getting four-odd times as much of marketable potatoes as in 1926-27. The square-pocket and square method of planting and sowing potatoes and other vegetables enables collective farms to achieve high yields by mechanizing the cultivation of these labour-consuming crops.

Flax and hemp are grown on large areas. Many new industrial crops were introduced in Soviet times: soya, peanut, the castor-oil plant, the tung-tree, the olive-tree, southern hemp, kenaf and jute, essential-oil, medicinal and other crops. The area under orchards is being expanded. In 1913 they took up 1,617,850 acres, today they occupy 6,175,000 acres. Twelve thousand collective

farms and 250 specialized state farms are engaged in vine-growing.

Tea was an import item before the Revolution. Now the Soviet Union grows its own tea. Its tea plantations in Georgia, the North Caucasus and Azerbaijan take up 148,200 acres.

Citrus plants were hardly cultivated in old Russia. Today orange, lemon and tangerine trees cover about 64,220 acres, yielding an annual average of 800 million fruit.

The Soviet system brought agriculture to the Far North. Grain crops, potatoes and other vegetables are grown in the Kola Peninsula, the Komi A.S.S.R. and farther east—in Yakutia and Sakhalin.

Livestock-breeding is an important branch of collective- and state-farm economy.

Before the war the Soviet Union's collective farms had 618,000 stock farms. There were also numerous state-owned stock farms. The war led to enormous losses in stock-farming, which it took the people much effort to restore and expand. The following table is indicative of that effort.

Productive Livestock in the U.S.S.R.
(in million heads)

Year	Cattle	Cows (included in the preceding column)	Pigs	Sheep and goats
1946	47.6	22.9	10.6	70.0
1953	63.0	26.0	47.6	135.9
1955	67.1	29.2	52.2	142.6
1956	70.4	30.9	56.4	129.8 (sheep only)

Collective- and state-farm output of marketable animal products has increased considerably. Between 1926-27 and 1952-53 it went up: for meat (in live weight), from 2,400,000 to 5,000,000 metric tons and for milk, from 947,135,000 to 2,901,000,000 gallons. But even this high rate of growth falls short of the increasing demand for meat, butter and milk.

The main branches of stock-farming in the Soviet Union may be described as follows:

The collective and state farms raise highly productive cattle of more than 50 basic breeds and breed groups. The most widespread are the oldest local breeds: Kholmogorskaya, Yaroslavskaya, Tagilskaya, Krasnogorbatovskaya, Astrakhanskaya and Krasnostepnaya and the newly evolved milch and beef breeds: Kostromskaya, Sichovskaya, Lebedinskaya, Kurganskaya, Kazakhskaya Belogolovaya and Alatauskaya.

The valuable fine-fleeced sheep of the Caucasus, Altai and Central Asia have won universal recognition.

The Ukrainskaya Stepnaya (Ukrainian Steppe) and Krupnaya Belaya (Large White) pig breeds, evolved by Soviet scientists, are well adapted to the pastures of the droughty southern regions of the Ukraine. Fattened pigs of 10-12 months weigh from 396 to 440 pounds each. Collective and state farms make huge profits by raising pedigree pigs of these two breeds.

The newly evolved horse breeds include the Russkaya Rysistaya (trotter), Vladimirskaya Tyazhelovoznaya (heavy draught), Latviiskaya Upryazhnaya (draught), Budyonnovskaya, Terskaya and Kustanaiskaya breeds. At the Harvest Day Collective Farm, Arzamas Region, a Soviet heavy-draught stallion pulled at the age of four

a record load in excess of 15 tons. The total number of horse breeds in the Soviet Union is 32.

Deer-breeding is widespread in the north of the country.

Collective and state farms readily engage in poultry-farming, rabbit-breeding and bee-keeping. These profitable branches are making rapid progress.

The best stock farms use such methods as keeping milch cows in stall camps, mechanical milking of cows and shearing of sheep, mechanized preparation of feeds, etc.

Great advances have been made in livestock productivity in the post-war years. Here are two examples.

The pig-breeding section of the Budyonnovets Collective Farm in Vologda Region, headed by A. Lyuskova, a Hero of Socialist Labour, has for many years now been getting a farrow of 25 to 30 per sow annually.

During the 19 years she has been working at the Kosikhino Beet Farm in Altai Territory Y. Babich, a Hero of Socialist Labour, has milked 220,000 gallons of milk from the group of cows in her care, each cow yielding an average of 1,050-1,145 gallons a year.

As the development of socially-owned stock-farming is directly bound up with the proper use of land, meat and milk production in the Soviet Union is assessed per 247 acres of arable meadow or pasture, pork per 247 acres of arable and eggs per 247 acres of grain crops.

The Soviet Union owes not less than 60 per cent of its annual milk production to pastures. Hence much care is being taken to use every acre of arable, meadow or pasture.

It has been estimated that, in order to supply the entire population with adequate food according to scientific standards, the Soviet Union must have an annual

average of 5,940 pounds of meat and 5,727 gallons of milk per 247 acres of arable, meadow or pasture, and not less than 6,600 pounds of pork per 247 acres of field. The foremost collective and state farms have already surpassed these averages, or have come close to them. In 1956 the New Way Collective Farm in Moscow Region obtained 9,000 gallons of milk per 247 acres of land and 7,040 pounds of meat. Its annual income nearly trebled, exceeding one million rubles.

SCIENCE HELPS DEVELOP PRODUCTION

Soviet scientists do much to promote agriculture. Thousands of research institutions, experiment stations and centres are engaged in the solution of agricultural problems. The U.S.S.R. Academy of Agricultural Sciences, named after V. I. Lenin, has a large network of research institutions and experiment centres.

In 1912 tsarist Russia had 122 agricultural research institutions and 334 research workers. The Soviet Union today has more than 1,100 agricultural research centres; in 1955 the number of research workers was nearly 15,000.

One of the oldest agricultural research establishments in the Soviet Union is the U.S.S.R. Plant-Breeding Institute in Leningrad. It has a collection of more than 150,000 plants, including about 10,000 specimens of rye from more than 50 countries and 12,000 specimens of maize from 64 countries. The institute library is stocked with more than 500,000 foreign journals and books.

The activities of the institute are manifold. It has 14 experiment stations in various zones of the country. They sow in their fields plants represented in the in-

stitute collection. The institute supplies research establishments with seeds for the evolution of new varieties. It gives much attention to the growing of hybrid maize seeds.

There are also about 1,500 state-owned variety-testing fields at collective and state farms. With state help collective farmers have opened numerous houses of agriculture.

Hundreds and thousands of scientists, practical workers and experimenters follow the example of the great transformer of nature, I. V. Michurin, evolving new varieties, introducing various crops into new areas and working out better methods of agronomy and livestock-breeding.

Michurin's name is rightly listed with those of the founders of new branches of biology, such as Lamarck, Darwin, Timiryazev, Sechenov and Pavlov. He evolved over 300 new, highly productive varieties of fruit- and berry-trees. Fruit-growing has advanced far to the north owing to his achievements. Michurin's teaching enables biologists to govern the nature of plants and animals.

Collective- and state-farm workers are resorting to Michurinist methods on an increasing scale. Stanislav Steinmann, a stock-breeder at the Karavayevo State Farm in Kostroma Region, has evolved the new Kostromskaya milch-cow breed, distinguished by unprecedented productivity. The Siberian Fyodor Grinko was among the first to lay out a Michurin orchard in Altai, which yields fruit that is not inferior to its southern counterparts.

T. Maltsev, a Hero of Socialist Labour, has suggested a completely new method of tillage guaranteeing high crop yields under any weather conditions.

Two or three years of "rest" increase the productivity of a field appreciably. Reasoning along these lines, Maltsev inferred that ploughing should be done once in four to six years, to a depth of 20-24 inches and in such a way as to loosen the soil thoroughly without, however, raising to the surface the lower layers, which are often largely saline. In all the other years tillage should not reach, according to Maltsev, deeper than three inches.

Experience has shown that the method proposed by Maltsev ensures a steady increase in crop yields and reduction of labour expenditure. In 1952 the Lenin Behests Collective Farm, Kurgan Region, where he works, harvested 16.3 bushels of grain to the acre and in 1955, despite drought, the per-acre average exceeded twenty-eight bushels.

The Soviet Government supported Maltsev's initiative. In 1954 two scientific conferences were held at the Lenin Behests Farm, attended by hundreds of research and practical workers in agriculture. As a result the progressive methods suggested by Maltsev spread to other regions of the country. It goes without saying that in applying the Maltsev system account is taken of the local climatic, soil and economic conditions.

The numerous experimental plant-breeding stations give collective farms tangible help in improving production. One of those famed among the peasants is the Ramonskaya Station in Voronezh Region. It has evolved highly productive varieties of sugar-beet; they are quick-ripening and drought-resistant, and more saccharine in content. In 1954 these varieties took up nearly 40 per cent of the country's total area under sugar-beet. The introduction of Ramonskaya varieties has enabled the

industry to put out additional tens of thousand tons of sugar.

Steadily improving methods and the rapid expansion of sown areas are typical of socialist agriculture. The foremost collective and state farms go on improving tillage; they use proper crop rotation and high-quality seeds, and plant forest shelter-belts (by 1952 their area totalled 7,410,000 acres).

Soviet atomic discoveries are making their way into agriculture. Instruments using the radioactive isotopes of phosphorus, carbon and calcium help investigate the processes taking place in the soil and in plants. The result is numerous interesting conclusions. In Tajikistan, Uzbekistan and other cotton-growing republics radioactive isotopes are used in determining the effectiveness of various ways of mechanized introduction of fertilizers.

The more than 100 agricultural higher schools and 782 secondary schools of the Soviet Union train specialists in agriculture.

The Timiryazev Agricultural Academy in Moscow has an enrolment of 4,000 students and post-graduate students, including nearly 300 foreigners. There are agricultural academies in the Ukrainian, Byelorussian, Latvian and some other Union republics. In 1952 the number of agronomists and other specialists was 30 times as large as in 1913.

Three-year agronomical and stock-breeding courses were established at collective and state farms in 1950. Those who finish them are awarded the title of master farmer. In 1955 they had an attendance of about 2,500,000 collective farmers.

As they acquire scientific knowledge, collective and

state farmers and machine and tractor station workers improve methods of farming. In January 1957 the Presidium of the Supreme Soviet of the U.S.S.R. awarded decorations to more than 109,000 people for their achievements in agriculture. Four hundred and sixty-two people, who had attained particularly noteworthy results, were awarded the title of Hero of Socialist Labour.

ON THE RISE

Soviet agriculture provides more food for the population and more raw materials for the industries with every passing year. But even so the progress made so far is considered inadequate.

The Communist Party and the Soviet Government have been carrying out important measures to increase agricultural production.

Here are some of those measures.

The material interest of agricultural workers in production was substantially increased.

The planning system was changed. Collective farmers now take greater part in the solution of pressing problems of their economy. Agriculture was supplied with more and better machinery. Collective and state farms and machine and tractor stations were reinforced with engineers and agronomists; 200,000 specialists were sent to the countryside from towns.

Large sums are allocated for the advancement of agriculture. Nearly 150,000 million rubles was appropriated from 1954 to 1956.

Between 1956 and 1960 capital investments in agriculture will be double the amount invested under the previous five-year plan and nearly 14 times as great as the

amount invested under the First Five-Year Plan. Gross agricultural output is to go up during the current five-year period roughly by 70 per cent.

The Soviet people see increasing gross production of grain to 180 million metric tons as their main task in agriculture. They are also working to achieve, within the next few years, much higher yields of cotton, sugar-beet, flax, hemp and sunflower, as well as of potatoes and other vegetables.

The reader may wonder why grain production has to be increased so considerably.

The point is that after the war industrial progress, the consolidation of collective farms and repeated price reductions improved the standards of living. In the fifth five-year plan period wages rose by 39 per cent and the real income of collective farmers by 50 per cent. The result was greater demand not only for bread but also for animal products.

The country's demand for grain is mounting, among other things, due to the natural growth of the population. Besides, more grain is needed for replenishing state stocks and expanding foreign trade.

Grain production is being increased in three ways.

First, by achieving higher yields and reducing losses in harvesting; second, by extending sown areas on virgin and fallow lands; third, by sowing more maize, a highly productive crop of great importance for stock-farming.

Higher crop yields all over the Soviet Union have always been an effective means of increasing grain production.

Many collective and state farms in the Ukraine, the North Caucasus, Kuban, West Siberia, Altai and other

regions harvest from 42 to 49.5 bushels of grain per acre on large areas. Their methods are widely popularized. If the average productivity of grain crops is raised by 1.5 bushels per acre—and experience has shown that this is feasible—the country will have millions of tons more of grain. And if losses in harvesting are reduced the result will be better still. That is why the machine and tractor stations are expected to harvest corn crops in 10 days at most.

Two-stage harvesting of grain crops is receiving special attention as an important means of avoiding losses. The experience of 1955 and 1956 has shown that on many collective and state farms two-stage harvesting increases the amount of grain brought in by three to seven bushels to the acre.

The cultivation of virgin and fallow lands in Kazakhstan, West and East Siberia, the Far East, the Urals, the Volga country and elsewhere has proved to be a most profitable source of grain production.

What is fallow or virgin land? Fallow is arable land abandoned and overgrown with wild grasses. Arable land that has lain fallow for more than 25 years is called virgin land, like land that is ploughed for the first time.

Ploughed virgin land and fallow yield bumper crops. In the eastern regions wheat and millet have turned out to be the two most productive crops. The wheat that grows in the eastern regions is firm and rich in protein and hence excellent for making fine flour, semolina, macaroni, vermicelli and noodles. Maize and other crops likewise grow well on virgin land.

The Soviet Union has vast expanses of virgin land, particularly in the East. Some time ago more than

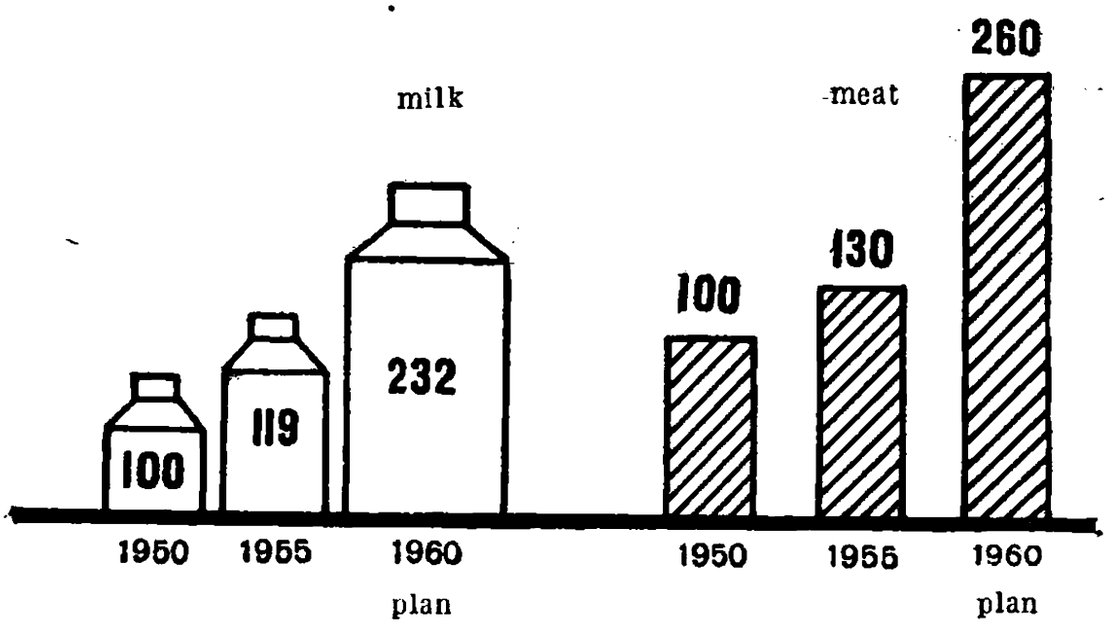
350,000 young people started to cultivate them at the call of the Party. Over 200,000 tractors and many other machines were sent East. Thanks to selfless work the new settlers succeeded in cultivating 87,685,000 acres of virgin and fallow land from 1954 to 1956. In other words, within less than three years the Soviet Union enlarged its crop areas by more than those of France, Italy, West Germany, Austria, Belgium, Denmark, Holland, Spain and Sweden put together.

The Party's plan for cultivating virgin and fallow lands has fully proved its worth. Whereas before its fulfilment Kazakhstan, Siberia and the Urals supplied some 9,600,000 tons of grain in the best years, in 1956 they produced more than 32,000,000 tons, Kazakhstan's share increasing sevenfold during the last three years. The state farms played a prominent part in increasing grain production chiefly through virgin land cultivation. In 1956 they delivered to the state 14,937,600 tons of grain—mainly wheat—or three times as much as they had provided in 1953.

Increased grain production in the East makes it possible to improve specialization in socialist farming. Areas under industrial crops that are more in keeping with local soil and climate are being expanded in some regions of the country. The Central Asian republics are sowing more cotton, the Ukraine more sugar-beet, the North Caucasus more maize, the non-chernozem belt of the Russian Federation more flax, potatoes and other vegetables.

As a result of the cultivation of virgin lands in West Siberia, Kazakhstan and Altai, where hundreds of large state farms have sprung up, entire areas of model socialist farming have come into being. Many skilled

industrial machine and tractor station and state-farm workers, as well as engineers, agronomists and other specialists in farming, teachers and doctors have gone to settle in those areas. So have thousands of collective farmers' families from the central regions of the Russian Federation, from the Ukraine, Byelorussia and other republics.



Increase in output of animal-husbandry products
(per cent)

The Soviet Government did its best to provide proper conditions for living and fruitful work in the newly settled regions. It decreed a number of inducements and special facilities for the new settlers.

How people on the virgin lands live can be seen from the example of the Free State Farm.

It is situated in what used to be the most out-of-the-way corner of Kazakhstan—Yesil District, Akmolinsk Region. The first settlers, who founded the state farm, arrived in the spring of 1954. They took to the rather forbidding but fertile region, and they decided to stay there. Many of them brought their families.

Tremendous difficulties had to be overcome. At the beginning there was a shortage of elementary necessities, and housing conditions were bad. But as they cultivated the land the new settlers built houses with state support. In 1955 hundreds of workers moved into comfortable flats equipped with radio and electricity. More than 100 people built themselves homes with outhouses and laid out orchards on their personal plots. The farm settlement now has a water-supply system and sewerage. It also has a library, a radio station, a medical centre and several shops selling furniture, clothing and other goods. The youth have built a sports stadium and a club-house.

The achievements of Soviet youth in bringing new lands in the East under the plough won high praise from the people. The Presidium of the Supreme Soviet awarded the Y.C.L. the Order of Lenin.

The year 1956 saw great progress in grain production. Never since Soviet rule was established had there been so abundant a grain harvest. The collective and state farms of the Russian Federation kept their word, supplying some 32,000,000 tons of grain, or as much as was produced by the entire Soviet Union in 1953. Kazakhstan, in her turn, furnished 16,000,000 tons of grain.

The more than 52,800,000 tons of grain produced in 1956 shows that the programme for increased agricultural production is being carried out.

In 1956 the Soviet Union produced not only more grain but also more sugar-beet, cotton, potatoes and other vegetables. The deliveries of sugar-beet, for example, totalled five million metric tons and those of potatoes exceeded the amount supplied in 1955 by 2,900,000 tons.

New milk-and vegetable belts are being created around towns and other industrial centres to improve supply, and the existing ones are being expanded. Fruit, berries and grapes are produced in increasing quantities.

Stock-farming is taking big strides in the current five-year period. By 1960 the Soviet Union is planned to be getting twice as much meat, nearly twice as much milk, more than 2.5 times as many eggs and 82 per cent more wool than now. Collective and state farms will have more poultry and will breed fish in ponds and other reservoirs.

It will not be easy to advance stock-farming so considerably within so brief a period, all the more because this branch of agriculture was not sufficiently developed before the war. But the collective-farm system provides unlimited opportunities in this field as well.

On the initiative of agricultural workers of Voronezh Region a movement has started in the Soviet Union for fulfilling the task of doubling milk and meat production in two or at most three years instead of five. By the end of 1956 the farmers of Voronezh Region had carried out their five-year plan assignment for meat, an accomplishment for which the region was awarded the Order of Lenin like a number of other regions and territories. In 1956 many collective and state farms and entire districts of the Ukraine attained the level of milk production set for 1960. There are favourable conditions for achieving similar results in other republics as well. That is why agricultural workers are certain that the Sixth Five-Year Plan assignments in the field of stock-farming can be carried out in two or three years. Even now sales of milk and other animal-husbandry products have increased noticeably.

More and better feeds are essential for the development of stock-farming. Maize is one of the most important feeding crops. With the rapid expansion of the area under maize stock farms will be supplied with not less than 64,000,000 tons of forage grain annually. Besides, more clover, lucerne and other grasses will be sown and more hay will be produced in those areas where these grasses grow well. During the current five-year period the output of mixed feeds will grow from three to four times over. In the arid regions care will be taken to water pastures on an area of about 197,600,000 acres.

The construction of stock-farming facilities and mechanization of labour-consuming operations at stock farms will acquire a vast scale in the current five-year period.

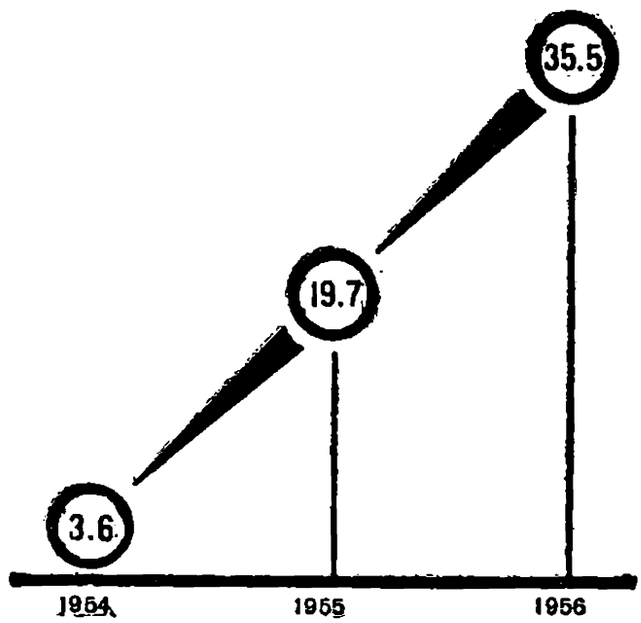
It is very important to distribute the various branches of agriculture properly and specialize them with due regard to prevailing natural and economic conditions.

The Sixth Five-Year Plan envisages the expansion of irrigated land, the building of canals and water reservoirs and the draining of marshland. In the Russian Federation the Pravo-Yegorliksky, Tersko-Kumsky, Kumo-Manichsky and Donskoi main canals, the Chograi Reservoir, and the Petrovsko-Anastasyevskaya and Maryano-Cheburgolskaya irrigation systems will be put into operation. In the Ukraine the Inguletskaya Watering and Irrigation System and the Simferopol Reservoir will be built. Work will be started on the construction of the North Crimean Canal. Large-scale land reclamation will continue in the marshy Polesie region of Byelorussia. A number of new reservoirs, canals and irrigation systems will come into being in the arid regions of Central Asia. The first section of the Kara-Kum Canal in Turkmenia will

start functioning. New forest shelter-belts will rise in droughty regions.

Millions of acres of new land are to be wrested from deserts, dry steppes and marshes for farming and stock-breeding.

Agricultural progress in the Soviet Union is closely bound up with the development of heavy industry, which supplies modern farm machinery. From 1956 to 1960 agriculture is to be supplied with some 1,650,000 tractors (in terms of 15-h.p. units), including 680,000 row-crop ones, 560,000 grain combines, 250,000 maize-pickers and ensilage harvesters, and also 180,000 windrowers for two-stage grain harvesting.



Area under grain crops on virgin and fallow lands (in million hectares)

Quantity production has begun of more economical diesel tractors and grain combines of new designs, mounted and semi-mounted machines with hydraulic controls and other farm machines.

The following examples illustrate the increasing use of mechanical equipment in agriculture.

Tractors were first delivered to farms on a comparatively large scale in 1929. During the first, second, third and fourth five-year plan periods a total of 1,375,000 tractors was supplied. Under the current five-year plan 275,000 more tractors will be supplied than during those twenty years.

Here is another example. Grain combines were first put out in 1931. By 1956 their number in use throughout the Soviet Union was 505,000. During the current five-year period 55,000 more combines will be delivered than in the previous 25 years.

Agricultural electrification will be stepped up. The number of collective farms using electricity will double before the end of the sixth five-year period. All state farms and machine and tractor stations will be supplied with electric power. Electrification will be carried out both by connecting collective and state farms to state power networks and by building local power stations with the aid of collective farms.

Up-to-date machinery, electricity, help from the town in the way of highly skilled personnel and the proper use of workers in the countryside will make for greater productivity in agriculture and hence higher incomes for the collective farms and their members and for all agricultural workers in general.

Thanks to the measures adopted by the Soviet Government, in particular repeated increases of purchase and procurement prices, the collective farms and their members have become more interested in expanding farm production. The total of payments in money and in kind received by collective farmers according to workday units in 1955 was more than 80 per cent above the 1950 figure.

The collective farmers' standard of living keeps rising.

Here is what Anisya Chobu, a collective-farm woman from the Moldavian village of Sinzhera, had to tell:

"We've got radio almost in every house. Before 1940 we only had a small school with two teachers. Now we

have 50 teachers and medical workers. There are three elementary and two seven-year schools in the village. We also have a club, a tea-house and a hospital. We are building a new shop. We no longer spend our free time as we used to. When the collective-farm brass band strikes up you should go and see the clothes and shoes that the children of former farm-hands and poor peasants have on. Nobody cares any more for plain shoes.

"So much for our village. As a Deputy I often go to other villages. They are building new houses or rebuilding old ones everywhere, and installing electricity and radio. That's a sure sign of plenty. Perhaps we Moldavians know better than anybody else that building a new house under the boyars wasn't any easier than being born anew."

Under the Sixth Five-Year Plan the peasants' incomes in money and in kind will go up by not less than 40 per cent on the average, primarily owing to increased incomes from the socially-owned economy. Even today collective farms are in a position to allocate more for the construction of crèches, kindergartens, club-houses, and homes for the aged. Millions of new homes will be built for collective farmers and the rural intelligentsia. The cultural make-up of the countryside will come much closer to that of the town.

* * *

Results achieved in recent years, when the Soviet people succeeded, despite drought in a number of regions, in providing an adequate supply of grain, meat, milk and vegetables, are a proof of the great potentialities of socialist farming, which develops according to plan, using the latest mechanical equipment.

The progress made in Soviet agriculture is vividly exemplified at the U.S.S.R. Agricultural Exhibition in Moscow. The exhibition displays the achievements of thousands of advanced collective and state farms, machine and tractor stations, stock farms, hundreds of thousands of distinguished workers, organizers and specialists, and the experience of numerous industrial enterprises supplying farm machinery and of research institutions.

There are more than 300 structures, including 57 pavilions, on the exhibition grounds. In 1955 as many as 1,400 different machines were on view in 26 halls, on 12 demonstration grounds and on the model MTS estate. Over 62 acres of the exhibition area is taken up by model fields and plantations. Demonstration fields display 2,098 of the best varieties of more than 260 crops, 814 varieties of fruit- and berry-trees, over 2,500 species and varieties of trees and shrubs used in forest shelterbelts or planted in towns.

The exhibition also has an extensive stock-farming section. There is not a single district, collective or state farm or machine and tractor station that has not sent its representatives to the exhibition. In 1955 it was visited by more than nine million people. Over a thousand lectures were delivered to visitors. Participants in and visitors of the exhibition heard talks by 103 collective-farm chairmen, 42 MTS and 60 state-farm directors, 229 specialists in agriculture, more than 230 expert grain-growers and stock-breeders and 160 scientists.

As a school of progressive methods the exhibition plays a prominent role in improving agriculture.

Between 1954 and 1956 the exhibition was visited by 2,500 delegations and tourist groups from 84 countries.

Collective and state farms were first set up in the Soviet Union more than 25 years ago. Every year brings fresh evidence of the vitality of the socialist system of agriculture embodied in collective and state farms.

HOW SOVIET PEOPLE LIVE

To give an idea of the standard of living in any country, one has to answer at least six questions:

First, what are the opportunities for employment, that is, do all able-bodied people have permanent jobs?

Second, how high are the incomes of the waged and salaried workers and the peasants?

Third, how high are the prices of consumer goods?

Fourth, to what extent does the state meet the social and cultural requirements of the population?

Fifth, what are housing conditions like?

Sixth, what is being done to protect the health of the population?

The facts and figures cited below are indicative of the standard of living in the Soviet Union.

EVERYBODY HAS A JOB IN THE SOVIET UNION

In the Soviet Union, people under 25 know what unemployment is only from books or what their elders have told them.

Before the October Revolution, Russia's industries drew labour mainly from the countryside. Tens and hundreds of thousands of ruined peasants went to town every year in search of employment. They crowded the labour exchanges or lined up at the gates of factories, waiting

day and night to be offered a job, no matter on what terms.

There was unemployment even in the early years of Soviet rule. The last unemployed were provided with jobs and the labour exchanges closed for good as far back as 1930.

How was unemployment abolished in the Soviet Union?

After rehabilitating the national economy ravaged by the First World War and foreign military intervention, the Soviet state began to develop industry and transport at an unprecedented rate. Reconstruction of the entire national economy was started according to plan. Millions of workers and numerous engineers and technicians were required for the hundreds and thousands of factories, mills, mines and railways under construction.

As a result unemployment was eliminated; moreover, our country is constantly faced with the need for more labour. Posters displayed in the streets of Soviet towns offer jobs in the coal, timber, fishing and other industries.

What are the sources from which industry and transport are supplied with labour?

The condition of the peasants changed with the advent of collective farming. Their standard of living improved and they no longer had to look for employment in town. Nevertheless, the countryside does provide a certain amount of labour for industry.

The fact is that Soviet agriculture is using increasingly more machinery. From 1946 to 1955, collective and state farms were supplied with more than 1,000,000 general-purpose tractors, tens of thousands of row-crop tractors, hundreds of thousands of grain combines and many other machines and implements. The progressing use of

machinery enables collective farms to release a certain number of peasants for work in the industries.

However, the main source of labour is the growth of the population, which exceeds 3,000,000 a year.

Every day the number of those newly employed in the Soviet Union increases by more than 4,000. This calls for particular attention to the training of skilled workers for industry, transport and civil engineering.

Future workers are trained in trade and railway schools at state expense. They are supplied with free living quarters, clothes and meals. Upwards of 5,000,000 have finished those schools since the end of the war.

In 1954 the first specialized secondary schools were opened for those who had received a general secondary education. In 1955 they had an enrolment of about 150,000. Within a relatively short time—from a year and a half to two years—specialized schools train skilled workers for the various branches of the national economy. After taking a job young workers have the opportunity to receive a higher education by correspondence.

At the beginning of 1956, 439 specialized schools were training young people in a great variety of specialities.

Training for new trades and refresher courses for workers are widespread in the Soviet industries. They involve millions of workers. Here are a few examples.

Vitaly Seminsky, a worker employed at the Krasny Ekskavator Plant in Kiev, received a general secondary education at the plant and after finishing a course in the theory of metal-cutting, became a highly skilled turner. He has written several books on speed metal-cutting and designed more than 50 instruments and other devices in recent years. The use of the innovations

suggested by him has saved the plant hundreds of thousands of rubles.

Every other worker at the Tbilisi Silk Mill is taking instruction and every fifth worker has a ten-year or higher education. Many workers were assigned key positions after acquiring a higher education by correspondence. To cite an example, Mikeladze, who is a woman weaver, now heads the quality inspection department of the weaving shop.

More than 68 million people acquired a new speciality or improved their skills in the Soviet Union between 1946 and 1955.

The total of workers and other employees has been growing year after year thanks to the rapid expansion of social production, as illustrated by the following data.

Annual Average of Workers and Other Employees Engaged in the National Economy of the Soviet Union

(in million persons)

1913	1932	1940	1950	1956	1960 (plan)
12.9	22.6	31.2	38.9	50.0	55.0

It follows that in Soviet times employment has increased fourfold.

Nevertheless, there is still some shortage of labour. What is being done to remedy it? Besides drawing new workers into the industries, the Soviet Government is carrying out large-scale mechanization and automation, putting to use the latest achievements of science and engineering.

The mechanization programme involves above all the

labour-consuming branches—the iron and steel, coal, timber, mining and peat industries, civil engineering and transport.

In the post-war years Soviet engineers have created many new metal-cutting, multiple-operation, automatic and semi-automatic machine-tools which make it easier to produce new machinery.

The measures being taken provide better conditions of work, help raise labour productivity and release part of the workers engaged in hard work so that they may take training and acquire the high skills required by the industries. As to choosing a trade that appeals to them and that will enable them to serve society to the best of their ability, Soviet people have every opportunity to do so.

The working people in the Soviet Union are interested in continuously improving their professional knowledge and raising their educational standard, for the fruits of their labour depend on their knowledge and skill which, in turn, affect wages.

WAGES

The October Revolution did away for ever with the exploitation of man by man and with economic discrimination towards the workers. Equal pay for equal work was made a principle.

Granting women equal rights with men, the Soviet state abolished the difference in the remuneration of men and women. Furthermore, proclaiming national equality, it put an end to the difference which had existed before the Revolution in the wages of workers of different nationalities. The remuneration of youth, who in

tsarist Russia had been paid much less than the adults, was likewise made level with that of others.

Soviet legislation and the trade unions have invariably upheld the principle: equal pay for equal work. Soviet citizens are paid for their work in accordance with its quantity and quality.

Under the Soviet remuneration system all categories—industrial workers, engineers, office employees, handicraftsmen associated in co-operatives, collective farmers and so on—have a material interest in their work. Therefore, all those who work try to improve their general and special knowledge and educational standard and to put out more high-quality products.

Workers' wages are paid in accordance with a tariff system, which helps to fix wages depending on the conditions of labour and the qualification of the worker concerned, the importance of the branch of industry and enterprise and its geographical location.

The tariff system consists of three related elements: rates of tariff, which determine the level of payment per hour or day, tariff scales, which determine the correlation in payment for labour in a given branch of industry between workers of different qualifications (grades), and tariff qualification tables, which help to assign workers and work to different grades (in accordance with the complexity of the work).

The following example, taken from the printing and publishing industry, shows how rates of tariff depend on the qualification of the workers:

Tariff grades	1st	2nd	3rd	4th	5th	6th	7th	8th
Tariff coefficients	1.0	1.13	1.28	1.46	1.67	1.95	2.30	2.80

Consequently, in the printing and publishing industry, the rate of tariff for workers of the highest qualification (8th tariff grade) is 2.8 times higher than for workers of the lowest qualification (1st tariff grade).

For workers employed on work with difficult conditions of labour the rate of tariff is 15-30 per cent higher than usual. Higher rates of tariff also concern workers at enterprises situated in remote areas or in areas with stern climatic conditions. For instance, in the Urals and in Siberia the wage of many workers and employees is 20 per cent higher than in the central regions.

The size of the rates of tariff also depends on the form of wages paid to workers: piece work entitles workers to a 10-15 per cent higher rate of tariff than workers receiving a fixed wage.

In Soviet industry, most workers are paid a piece wage. The most widespread system is the individual direct piece scale under which the wage of the worker is directly dependent on quantity.

Many workers are paid in accordance with a progressive piece-rate system under which the wage rises progressively depending on the percentage of overfulfilment of the work norm.

In the heavy machine-building industry, for example, the following system of payment operates for a certain group of workers:

Percentage of overfulfilment of work norms	Rise, in per cent, of piece rate for overfulfilment of work norms
1-10	100
Over 10	200

This means that for workers who have overfulfilled their work norm by one per cent and over, the piece rate

for the work done over and above plan is doubled, while for those who have overfulfilled the norm by 10 per cent, it is trebled.

Workers whose work cannot be calculated on a piece rate are usually paid a fixed wage plus bonuses. In addition to rates of tariff (fixed monthly wages) they are paid bonuses for economizing on materials, fuel and electricity, for cutting down or eliminating machine idle time, reducing the number of or putting an end to rejects, and so forth. The size of the bonus fluctuates between 10 and 50 per cent of the monthly tariff rate.

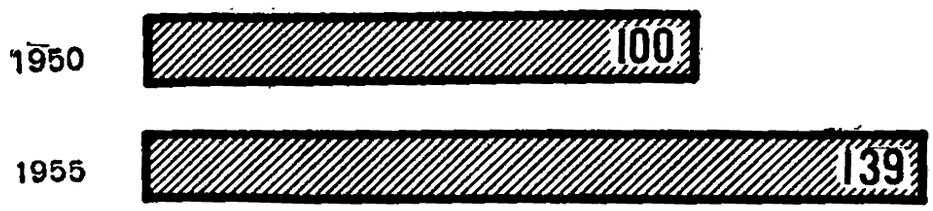
Heads of enterprises, technical personnel and employees are paid monthly salaries fixed by the Government and which depend on the conditions and volume of work, the importance of the enterprise, the complexity of the technological processes, and the qualification of the worker concerned and his length of service.

Furthermore, technical personnel and employees of industrial enterprises receive bonuses when their enterprise fulfils or overfulfils its output plan.

It must be noted that in some branches of the national economy, workers, technical personnel and employees receive payment for long service. The size of these payments fluctuates between 10 and 30 per cent of the annual income and depends on the length of service and the working conditions.

Industrial workers' wages are also augmented by bonuses paid out of the fund of the enterprise. Every enterprise has such a fund which it builds up with deductions from profits. Depending on the branch of industry, the size of these deductions is between one and six per cent of the planned profits and from 20 to 50 per cent of the profits over and above plan.

Some of the money from this fund is used to extend production, to build and repair workers' dwellings, and to equip and furnish holiday homes, sanatoriums and kindergartens. But a considerable part of it is spent on bonuses to workers and employees for production successes and on helping any worker who is in need of material assistance.



Increase in real wages of industrial and office workers

Money received by industrial enterprises for successes in the nation-wide emulation movement is paid into a fund which is an additional source that is drawn upon for bonuses to workers and employees.

Most of this money (60-70 per cent) is paid out in individual bonuses to workers, technical personnel and employees. The remaining 30-40 per cent is spent on improving cultural and everyday services and on housing requirements (house repairs, purchase of equipment for children's establishments, holiday homes, sports facilities, and so forth). The bonus money is paid out at the discretion of the director of the enterprise with the agreement of the factory or plant trade-union committee.

In the Soviet Union, higher labour productivity is accompanied by a systematic rise of the wage level. In 1955, the real earnings of factory, office and other workers were 39 per cent higher than in 1950.

The Sixth Five-Year Plan envisages the elimination of shortcomings in the wage system (regulating the tariff system and the procedure of establishing work norms, introducing a more effective bonus scheme, etc.) and an approximately 30 per cent rise in the real earnings of workers and employees. Provision is also made for raising the wages of unskilled categories of workers.

The Communist Party and the Soviet Government attach great importance to the reduction of the working day. At present, the Soviet Union has real opportunities of taking a long step forward in that direction. A six-hour working day on Saturdays and on the eve of holidays was introduced in 1956. In 1957, workers and employees began to go over to a seven-hour working day or, as in the case of some branches of industry, to a week of five eight-hour working days and two off days.

By January 1, 1957, all workers employed on underground work in the Donbas were switched over to a shorter working day: miners employed at the coal face work to a six-hour shift, and workers engaged on other underground jobs—to a seven-hour shift.

The transition to a shorter working day is being carried out by the Government without any reduction in the wages of workers and employees.

The principle of equal pay for equal work concerns all working people in the U.S.S.R.: factory, office and other workers. However, collective farmers are paid under a different system than workers employed in industry.

Collective farmers have an additional income from their individual economies.

The radical improvement in the welfare of the peasants is largely due to special measures taken by the Government. Fixed prices for produce turned over to the state

as obligatory deliveries were increased in 1953. For instance, prices for livestock and poultry were raised more than 5.5 times, for milk and butter—2 times, for potatoes—2.5 times, for vegetables—from 25 to 40 per cent.

Increase in peasant incomes

In February 1956, procurement and purchasing prices for potatoes and other vegetables were raised by another 70 per cent.

At the same time, the Government reduced the size of the obligatory livestock deliveries, cancelled all arrears in meat and potato deliveries by individual peasant economies, and lowered the collective-farm delivery quota for potatoes and other vegetables. That gave collective farmers larger surpluses for sale to the Government at fixed prices, which have been raised substantially, and for sale in the market where prices depend on supply and demand.

As a result of the economic growth of the collective farms, the incomes of the collective farmers have doubled in the past three years (1954-56). During the fifth five-year plan period, the real incomes of collective farm-

ers increased by an average of 50 per cent, while by 1960 they will rise by another 40 per cent.

Taxes levied by the state are an exceedingly important index showing the level of the wages and salaries of industrial, office and other workers and of the incomes of the peasants.

In this country there are three kinds of taxes: income tax; bachelor and small-family tax; agricultural tax and certain local taxes and dues.

Income tax is paid by factory, office and other workers, co-operated craftsmen, artisans, workers in art and literature, and other citizens with independent sources of income.

A tax-free minimum wage has been established. Until 1957, this minimum was 260 rubles, but on January 1, 1957, it was increased to 370 rubles.

Factory, office and other workers pay a tax of 1.5-13 per cent of their actual earnings, depending on the size of these earnings and on the number of dependants. If a worker has three or more dependants his income tax is reduced by 30 per cent.

These conditions also extend to literary workers. The maximum (13 per cent) income tax is paid by literary workers whose annual income is more than 12,000 rubles. Physicians, lawyers and other professional men with a private practice pay a higher income tax than workers and employees.

The bachelor and small-family tax to some extent covers the tremendous expenses borne by the state in rendering material assistance to expectant mothers, mothers of many children and unmarried mothers, and providing for mother and child welfare. This tax is paid by men between the ages of 20 and 50 and by women

between the ages of 20 and 45. The size of this tax is: six per cent of the income when there are no children; one per cent when there is one child; and half of one per cent when there are two children. This tax is not paid by servicemen and their wives, students of secondary and higher educational establishments below the age of 25, and women receiving a gratuity or pension for the upkeep of children.

Peasants pay an agricultural tax on the income received from their individual economies. The income received by collective farmers against workday units is not taxable.

In 1953, the Supreme Soviet of the U.S.S.R. passed a new agricultural tax law, whose implementation reduced the total agricultural tax two and a half times.

Local taxes include taxes on buildings and dues paid at collective-farm markets. These taxes and dues are paid into the local budgets.

In the U.S.S.R., taxes are not a burden for the population; they comprise less than nine per cent of the budget income.

In 1956 taxes paid by the population amounted to 50,300 million rubles. At the same time, the Government spent more than 100,000 million rubles only on public education and social insurance.

Taxes are being systematically reduced in this country.

PRICE LEVELS FOR CONSUMER GOODS

It is a generally known fact that by itself a wage or salary does not determine the level of a working man's prosperity. Wages may rise but living standards may

remain the same or even drop. That takes place when prices for consumer goods grow faster than wages.

Let us examine the situation in the Soviet Union.

In this country there is no private ownership of the means of production and no striving after profits. Social production aims to satisfy the steadily growing material and cultural requirements of the people. In view of the constantly increasing labour productivity, output is steadily expanding and costs are falling. That makes it possible to raise living standards uninterruptedly.

Soon after the war (at the close of 1947), the rapid rise of the national economy enabled the Government to abolish ration cards and to introduce lower unified state prices for food-stuffs and manufactured goods.

The government lowered these prices a few times in the course of the next eight years (1947-54). The price reductions earmarked by the Fifth Five-Year Plan (1951-55) were carried out ahead of time. By 1954, the 1947 prices for food-stuffs and manufactured goods were, on the average, cut by more than 50 per cent. The following comparative data show the purchasing power of one and the same sum of money in 1947 and in 1956:

	1947		1956	
Bread	1 kg.	(2 lbs. 3 oz.)	2 kg. 850 grm.	(6 lbs. 3 oz)
Meat	1 kg.	(2 lbs. 3 oz.)	2 kg. 800 grm.	(6 lbs. 2 oz.)
Butter	1 kg.	(2 lbs. 3 oz.)	3 kg.	(6 lbs. 6 oz.)
Sugar	1 kg.	(2 lbs. 3 oz.)	2 kg. 300 grm.	(5 lbs. 1 oz.)
Milk	1 lit.	(1.05 quarts)	1.4 lit.	(1.47 quarts)

In 1956, the family of a worker spent 43 rubles to buy the amount of manufactured goods and food-stuffs that cost 100 rubles in 1947.

The money that had to be paid for a first-class suit in 1947 can now buy that same suit plus one pair of men's shoes and two pairs of children's leather boots.

The growing savings bank deposits are a vivid illustration of the prosperity of workers, collective farmers and employees. To date, 37 million people have accounts in savings banks. Towards the beginning of 1957, the deposits from the population exceeded 63,000 million rubles, which is a ninefold increase compared with pre-war times.

The result of the systematic cuts in prices is that many food-stuffs and manufactured goods are cheaper today than they were before the war. In particular, this concerns white bread, mutton, poultry, and potatoes and other vegetables. On the whole, prices for food-stuffs and manufactured goods are somewhat higher than before the war, but wages and salaries have doubled since then.

Agricultural development is accompanied by retail price reductions in the collective-farm market.

Data from the Central Board of Statistics show that in the course of nine months in 1956, the prices for food-stuffs prevailing in the collective-farm market in the corresponding months of the preceding year fell in the following proportions: bread-stuffs—by 14 per cent; vegetables—by 19 per cent; milk—by 21 per cent; butter —by 28 per cent.

It must be remembered that in many regions the collective-farm market is an important source of supply for the working people.

The reduction in prices is reflected in the budget of every Soviet family.

The management of the Vlast Sovetov Collective Farm, Shatkov District, Arzamas Region, calculated that

in 1954, as a result of the price cuts, the farm saved more than 10,000 rubles in the purchase of slate and other roofing materials, over 12,000 in the purchase of cement, and 14,000 in the purchase of hardware. The reduction in the price of fuel and lubricants for agricultural machines gave the farm a saving of 71,000 rubles in the summer and autumn. That year, the income of the farm itself and of the collective farmers increased by almost half a million rubles.

The purchasing power of the people is steadily growing. For example, commodity circulation (in comparative prices) increased almost eight times in the course of 27 years (1926-53). The volume of commodities on sale grew by a yearly per capita average of 10.3 per cent. In the course of 27 years (1885-1912), commodity circulation in tsarist Russia increased threefold, while the volume of commodities on sale grew by an average of 3.5 per cent annually. Consequently, in Soviet years it is expanding three times faster than in pre-revolutionary times.

Today, consumption is much higher than in 1940. According to data obtained from a budget survey by the Central Board of Statistics, in 1956 per capita consumption in the families of factory, office and other workers registered the following increases over the 1940 level: meat and fat—by 62 per cent; fish and fish products—by 92 per cent; milk and other dairy products—by more than 100 per cent; eggs—by 86 per cent; sugar—by 87 per cent. In the families of collective farmers, per capita consumption increased: meat and fat—by 54 per cent; fish and fish products—by more than 100 per cent; milk and other dairy products—by 47 per cent; eggs—by more than 100 per cent; sugar—by 260 per

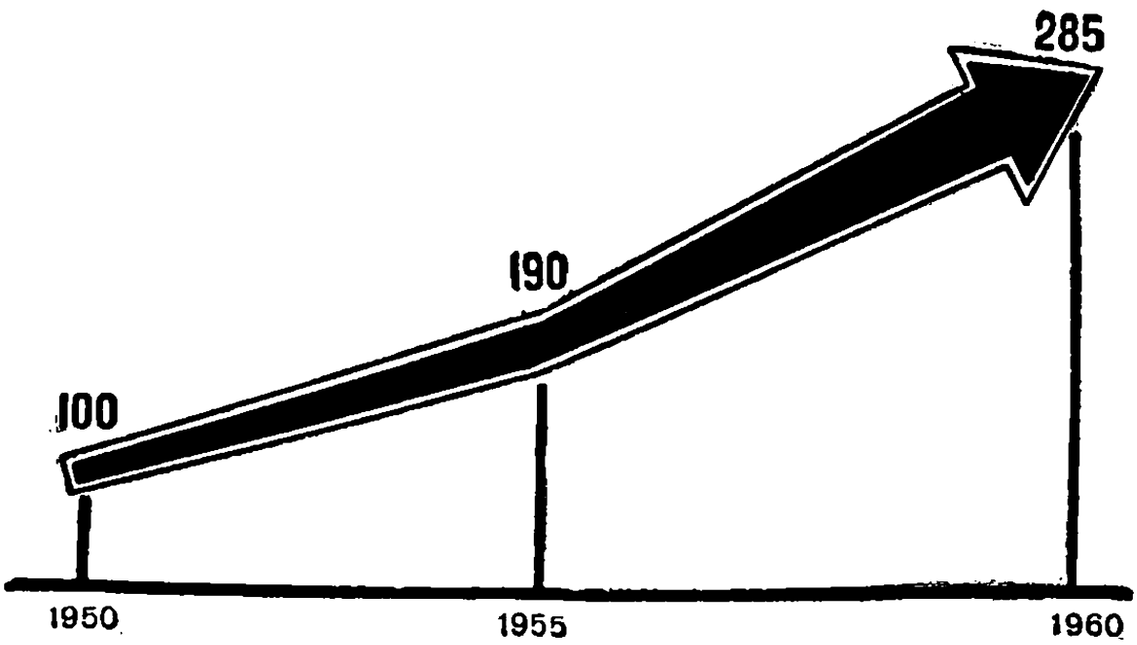
cent. In 1956, the working people bought considerably more consumer goods than in 1940, as the following figures show: fabric sales registered a mean increase of 94 per cent (this includes an almost threefold increase in the sale of woollen fabrics); leather footwear sales increased by 83 per cent. The corresponding per capita figures for the countryside were: fabrics—100 per cent (woollen fabrics—three and a half times); leather footwear—95 per cent.

Prior to collectivization, the peasants chiefly bought bare necessities. For example, in 1924-25, salt, matches, kerosene, household soap and cotton textiles comprised over two-thirds of the rural commodity circulation of the consumers' co-operatives. Today, the picture is quite different. The demand for articles of personal use in the countryside is steadily reaching the urban level.

The co-operative shop in the village of Kholmogorovka, Kazakhstan, can be taken as an illustration. It serves the members of a collective farm in Taldi-Kurgan Region. After the first post-war price reduction in 1947, the monthly turnover of this shop was between 50,000 and 60,000 rubles. Since then, systematic cuts have brought prices down to less than one half. Yet, instead of dropping, the shop's turnover went on rising. In 1955, the shop sold more than 100,000 rubles' worth of goods a month. In the past five years, the inhabitants of the village of Kholmogorovka have been buying three times more sugar, four times more confectionery, seven times more woollen fabrics, eight times more ready-made garments, and so on. Compared with 1948, book sales have increased 65 times.

In 1955, the trade turnover throughout the countryside was almost 17 times bigger than in 1928. It goes with-

out saying that the sale of such commodities as salt, matches, kerosene, household soap and cotton textiles rose but now they comprise only 18 per cent of the total commodity turnover. On the other hand, sales of other goods such as ready-made garments, woollen and silk fabrics, footwear and so forth have increased tremendously.



Increase in retail sales

In 1955, the retail trade turnover in the country was (in comparative prices) almost double that of 1950.

The purchasing power of the people is growing so fast that it is overtaking the output of consumer goods. For that reason, the demand for some commodities is not yet being fully supplied.

The Sixth Five-Year Plan provides for an immense increase in the output and sale of food-stuffs and consumer goods. In 1960, shops will sell 85 per cent more meat products than in 1955, 2.7 times more milk and dairy products, 2.6 times more eggs, 70 per cent more sugar,

100 per cent more woollen and silk fabrics, five times more TV sets, 4.7 times more refrigerators, 6 times more washing machines, and so forth.

All this shows that the quantity of food-stuffs and consumer goods sold to the population is increasing with exceptional rapidity.

STATE EXPENSES ON SOCIAL AND CULTURAL REQUIREMENTS

The picture of living standards in the Soviet Union would be incomplete if it is limited to data on the growth of the incomes of factory, office and other workers and of peasants, and on the price level for consumer goods.

In the budget of every Soviet family a large part is also played by benefits and conveniences which are provided at the expense of the growing state outlays on social and cultural requirements. It has been calculated that on the average these benefits and conveniences increase the actual incomes of the working people by at least a third.

The strengthening and expansion of the national economy is accompanied by increasing state allocations for the social and cultural needs of the people. In the first five-year plan period, these expenditures totalled 20,200 million rubles, a figure that rose to 689,000 million rubles during the fifth five-year plan period or to as much as was spent on social and cultural requirements in all the four preceding five-year plan periods taken together.

The following data give an idea what these tremendous sums of money, which in 1957 comprised over 30 per cent of the expenditures from the state budget, are spent on:

Total allocated for social and cultural requirements in 1957	188,200	million	rubles
Of which:			
For public education	78,900	million	rubles
For public health and physical culture	37,900	million	rubles
For state social insurance	20,900	million	rubles
For social insurance	45,400	million	rubles
For state benefits for mothers of many children and unmarried mothers	5,100	million	rubles

In 1960, the Government's per capita expenses on various services and benefits to the people will be 280 rubles more than in 1955.

Huge sums of money are spent on social insurance. In 1940, the state social insurance budget amounted to 8,600 million rubles, but in 1956 it was 18,600 million rubles.

All workers and employees, wherever they may be working, are insured by the state, the money for this social insurance coming from dues paid by enterprises and establishments. The size of these dues is fixed by the Government in percentage to the wages and salaries paid to workers and employees.

Social insurance covers grants to factory, office and other workers in the event of temporary disability (illness or injury), to pay for nursing a sick member of a worker's or employee's family, or to pay for treatment at a health resort. Sickness or injury grants are paid from the first day of illness to the time ability to work is restored or until the day a special medical commission pronounces the patient unfit for work. Disability pensions, old age pensions as well as pensions for families of factory, office and other workers who have lost the bread-winner are paid out of the social insurance fund. More than 40 per cent of the annual social insurance budget was spent on various kinds of pensions.

In July 1956, the Supreme Soviet of the U.S.S.R.

passed a new law on state pensions, which fundamentally improves the pension system in the Soviet Union.

Old age pensions are paid to men who reach the age of 60 after not less than 25 years' service, and to women who reach the age of 55 after not less than 20 years' service. The law provides for favourable pension terms for factory, office and other workers employed on heavy work (underground, in hot shops, or work with harmful conditions of labour): for men—on reaching the age of 50 or 55, and after not less than 20-25 years' service; for women—on reaching the age of 45 or 50, and after not less than 15-20 years' service.

Prior to the introduction of the new law, no factory, office or other worker was eligible for a pension without the stipulated length of service. The situation now is that if a factory, office or other worker has worked for at least five years and in the period of his work reaches pension age but does not have a sufficient length of service for the receipt of an old age pension, he is granted a pension in proportion to his length of service but not less than a quarter of the full pension. Under the new law, old age pensions have been substantially increased: the pensions now received range from 50 to 100 per cent of the average actual earnings, the minimum being 300 rubles, and the maximum—1,200 rubles per month.

Factory, office and other workers who have worked conscientiously at one enterprise or establishment for more than 15 years receive a 10 per cent increase on their pension. Unlike the former conditions, the new law provides for increases to old age pensioners who have work-incapable dependants.

Students of all educational establishments and courses as well as all other citizens of the U.S.S.R. are pen-

sionable if they have become disabled in the execution of state or public duties.

The size of disability pensions has also been considerably increased. Formerly, pensions on account of disability resulting from an industrial accident or occupational disease were fixed at 50, 75 and 100 per cent of the pay, depending on the category of disability. Now, these pensions amount to 65, 90 and 100 per cent of the pay within limits of 400-450, 500 and 600 rubles. Increases amounting to 10, 15 or 20 per cent of the remainder of the pay are added to the pension. Workers employed on underground work or other work with difficult conditions of labour are eligible for disability pensions on favourable terms. Moreover, disabled workers receive increases of up to 15 per cent of the pension for continuous service.

The new law provides better pension security for members of families that have lost the bread-winner. The circle of people eligible for such a pension has been enlarged: in addition to the children, brothers, sisters, parents and spouse, the right to this pension is enjoyed by the grandchildren, grandfather and grandmother of the deceased.

Higher pensions are now granted to war invalids and other disabled servicemen as well as to the families of servicemen killed in action.

Persons in need of state maintenance have the opportunity of living in homes for the aged or boarding houses for invalids where everything is provided at state expense. In 1955, the country had 900 such homes and boarding houses with nearly 120,000 inmates.

Actively assisted by the trade unions, the Government is systematically improving labour conditions. In the fourth five-year plan period, state expenses on labour protection and safety engineering were five times greater

than in the period of the first and second five-year plans taken together. During the Fifth Five-Year Plan, meanwhile, more than 10,000 million rubles were spent only on improving safety engineering and industrial sanitation.

The trade unions have special research institutes and laboratories studying problems of safety engineering and working out practical measures aimed at improving safety engineering, industrial sanitation and ventilation.

A large part of the money from the social insurance budget is spent on grants to expectant and nursing mothers.

The grants paid to mothers of big families and to unmarried mothers in the period between 1944 and 1954 amounted to 34,500 million rubles. In 1956, these grants totalled more than 8,000 million rubles.

Here is what N. Krainova, a worker in the machine shop at a factory in Moscow, says: "I, a young mother, have received quite a lot of help from the state. The factory trade-union committee gave me a free pass to a special sanatorium for expectant mothers, where I received medical attention and had a good rest. There, I attended a few lectures on maternity hygiene and on the upbringing of children. I was given the usual two and a half months' maternity leave with full pay, the pay coming from the social insurance fund. After that I took my regular paid leave."

Measures aimed at improving the labour conditions and life of women are being carried out under the Sixth Five-Year Plan. Paid maternity leave has been prolonged to 112 days.

The network of public utilities, laundries, tailoring establishments, and garments and footwear repair shops will be considerably enlarged. Public catering will be

improved. All these facilities will help to free millions of women from numerous household chores and give them more time for socially useful work and for bringing up their children.

The upbringing and education of the rising generation is receiving great attention from the Government.

There are 6,794 homes for children who lost their parents in the war. These homes accommodate more than 700,000 children. In addition, trade-union organizations have opened 642 children's homes at their own expense.

During the summer and winter holidays, many school children go to Young Pioneer camps which are situated in various picturesque spots with good climatic conditions. Kindergartens and crèches take their children out for the summer to suburban cottage camps.

Children's holidays are organized by trade unions with help from the managements of enterprises and establishments. In 1956, for example, two and a half million children went to the Young Pioneer summer camps run by the trade unions alone.

Parents pay an average of less than a third of the cost of maintaining a child in a Young Pioneer camp or at a health resort. Quite a few children are accommodated free of charge, a right enjoyed by the children of soldiers killed in the war, disabled workers, servicemen, and parents of large families.

Millions of working people spend their leaves at health resorts in the Crimea, the Caucasus, the Baltic region, the Urals, the Far East and other places at the expense of the social insurance fund. Many of them go on tourist trips to interesting places in the country. Passes to trade-union health resorts, holiday homes and tourist camps are

provided at a discount of 70 per cent. Twenty per cent of the passes are handed out free.

"I spent a very pleasant leave in Sochi, on the shore of the Black Sea, together with my brother and father," says Pavel Pilipchatin, a Donbas miner. "We stayed in the huge and splendid Sergo Orjonikidze Miners' Sanatorium, which stands in the heart of Sochi. The pass cost more than a thousand rubles but we paid only 30 per cent of that. We had a two-room suite. At the sanatorium there are a polyclinic, a dining-room, a club, a library, a billiard room, a gym, and a swimming pool. A cable railway connects the sanatorium with the beach. Comfortable buses make the run to Matsesta, where people take special baths."

Many workers, engineers and employees—steel-makers, machine-builders, railwaymen, food and textile industry workers and workers in other branches of the national economy—spend their leaves and receive medical attention in similar conditions.

The holiday homes and health resorts that were destroyed by the fascists have been rehabilitated and new ones have been built. At the moment, more than 350 health resorts and over 3,000 sanatoriums and holiday homes are functioning in the country. In 1954, sanatoriums, holiday homes and tourist camps served 11 million people.

All factory, office and other workers enjoy an annual paid leave. This leave lasts from 12 to 48 days depending on the profession and conditions of labour.

In recent years, many people have been spending their leaves in tourist trips abroad.

Under the Sixth Five-Year Plan, the Government will substantially increase its expenditures on the social and

cultural requirements of the people. In 1960, these expenses will amount to 210,000 million rubles as against the 147,200 million rubles spent in 1955. That will make it possible to achieve a much higher living standard for the people.

HOUSING DEVELOPMENT

Under tsarist rule, millions of people lived in very difficult conditions. More than 80 per cent of all the urban houses were built of wood. Half of the roofs were made of boards, rushes or straw. Frequent fires made masses of people homeless, while the municipal services were very badly organized. In the towns, rents were up to 20-25 per cent of the people's earnings.

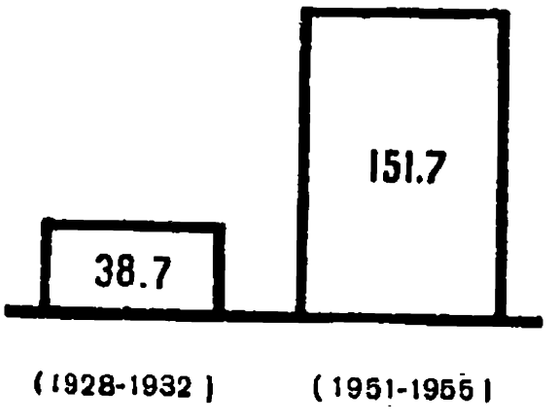
Workers lived in particularly bad conditions. In Petersburg, 50 per cent of the workers rented a single bed or only a corner of a room for a whole family. Nearly half of the miners in the Donbas lived in dirty mud huts, which had neither floors nor windows. Twenty-five per cent of the miners lived in barracks where they slept on plank beds. In 1912, two-thirds of the population of Moscow lived in crowded barrack-type houses and in basements and semi-basements.

Right after the October Revolution, hundreds of thousands of workers' families were moved from basements and hovels to the comfortable flats that had been occupied by the rich people. Most of the houses in the towns were nationalized. In Moscow alone more than half a million workers moved into new flats.

When the Civil War ended, the country began to rehabilitate destroyed dwellings and to build new houses. Housing construction was particularly heavy in the

1930's. The rapid advance of the national economy and the creation of new industrial centres started a tremendous influx of people into the towns. Prior to the Revolution, townsfolk comprised 17.7 per cent of the population, but by the beginning of the war nearly a third of the population lived in towns.

Those years witnessed the appearance of Karaganda, Komsomolsk-on-Amur, Kirovsk, Balkhash, Kramatorsk, Igarka and many other big towns.



Housing construction in the U.S.S.R. (in million sq. m.)

New industrial towns rose overnight, as it were. In 1929, only 600 people lived in the workers' settlement of Magnitogorsk. By 1939, it had 145,000 inhabitants, and today it is one of the country's most important eastern industrial centres with a population of a few hundred thousand.

The appearance of the old towns changed as well. The dirty, crooked streets with cobble-stones here and there, and the ramshackle wooden houses disappeared. They gave way to broad, straight thoroughfares with tall blocks of bright, comfortable flats. Thoughtful planning, abundance of vegetation, and excellent municipal services are a feature of many Soviet towns.

The Government annually spends enormous sums of money on housing development. In 1955, the floor space in the towns was three and a half times greater than in 1913.

Many houses have been built in the national republics. For example, in the period between 1926 and 1940,

floor space was increased by 5.5 times in Kazakhstan, 3 times in Georgia, and 6.5 times in Kirghizia.

Once an out-of-the-way provincial town, Alma-Ata has grown into one of the most beautiful cities in the country. The straight, asphalted poplar-lined streets with *ariks* flowing along their sides are three-five miles long; in the squares there are flower-beds, fountains, and sculptures, and fruit-trees grow in the courtyards. The city has a modern water supply network, and tram and trolley-bus lines.

The war disrupted the country's peaceful life. The Hitlerite hordes that invaded the U.S.S.R. destroyed everything that stood in their path. They laid waste and burned 1,710 towns and more than 70,000 villages. More than six million houses were levelled with the ground. Nearly 25 million people were made homeless.

While the war was still raging, the Government adopted measures to house the people who were left without a roof over their heads and to restore the destroyed houses.

When the war ended, the Government moved housing construction to the fore.

In the fourth five-year plan (1946-50) period, capital investments in housing construction amounted to 42,300 million rubles, which was more than was spent for this purpose in the preceding two decades. In the fifth five-year plan period, the expenses on housing development were more than doubled compared with the fourth five-year plan period and comprised nearly 100,000 million rubles.

The abolition of private landownership opened up great opportunities for rational planning and for the solution of far-reaching architectural problems in towns,

workers' settlements and villages. For that reason, after rehabilitation towns and villages are much better than they were before. Hundreds of thousands of handsome buildings have been erected in Smolensk, Voronezh, Orel, Kishinev and other cities that were ravaged by the Hitlerites. All the houses destroyed in Leningrad, Rostov-on-Don, Kursk, Kalinin, Kiev, Dniepropetrovsk, Zaporozhye, Minsk, Petrozavodsk, Riga and Tallinn have been restored and many new houses have been built.

The hero city of Stalingrad was raised from ash and ruin in a matter of a few years. By 1954, its factories and plants were not only restored but reconstructed, and there already were 116 schools, five institutions of higher learning, and 82 public libraries. Whole blocks of tall apartment buildings appeared where ten years before there was nothing but heaps of rubble. In 1955 there was 18 per cent more floor space in the city than before the war.

Individual housing construction is proceeding on a big scale.

Citizens of the U.S.S.R. have the right to buy or build a privately-owned house and to lay out an orchard and a kitchen garden. People who build individual houses receive a seven-year loan of 10,000 rubles from the state.

Many individual houses have been built by workers, technicians and employees of the automobile, iron and steel, coal, oil and other industries. Here is one example. F. G. Bescherevny, a coal-cutting machine operator in the small Donbas mining town of Gorskoye, built himself a house, which consists of a dining-room, a bedroom, two childrens' rooms, and a glassed-in porch. In his yard, he has a cowshed and a garage. There is also a garden and a vegetable plot.

In an article printed in the journal *Soviet Trade Unions*, Merenkov, chairman of the housing commission at the October Revolution Works in Voroshilovgrad, writes that "the workers are now building fine individual houses with conveniences. Usually, they have three or four rooms, a kitchen, a pantry, and a glassed-in porch. An orchard and flower-beds are laid out around them."

Altogether, in the past ten years, state enterprises and offices, the local Soviets, as well as individuals using state credits, have restored or built houses totalling more than 29,800,000 million square feet of floor space. Nearly four and a half million houses were built in the countryside in the same period.

Some two thousand urban families and a thousand collective-farm families move into new homes every day.

Rents are very small, the maximum being 13 kopeks per square foot. No rent is paid for the use of the kitchens, the corridors and the bath-rooms. For families of four to six persons the rent is from 5 to 15 per cent lower. Capital repairs are made at the expense of the state.

After the war much was done in every city and town to put gas in houses and flats, plant greenery, pave and asphalt the streets and squares, and lay out parks and boulevards.

The quantity of gas supplied to the population in Moscow has increased more than eight times in the postwar years. In the main, the gasification of the Soviet capital has been completed. Economists estimate that as a result of gasification the annual fuel expenses of the people of Moscow have dropped by approximately 200 million rubles.

The Soviet capital is engaged in large-scale construction of dwelling-houses, schools, hospitals, hotels and

cinemas. In the course of the fifth five-year plan period, Muscovites received more than 45 million square feet of floor space with all modern conveniences.

Fernand Grenier, Deputy to the French National Assembly, who visited the Soviet Union, noted that in the six years between 1947 and 1952 ten times more floor space was built in Moscow than in Paris and in the entire Department of Seine.

Both Moscow and Leningrad have an underground railway which is known as the Metro. The Moscow Metro has 45 stations, and other stations will be commissioned in the near future. This underground railway is nearly 40 miles long. The network of trolley-bus and bus lines has been considerably enlarged.

Greenery is being planted all over the capital. An illustration of the scale of this work is that in the past few years nearly a million and a half trees have been planted in the streets. The area under greenery now exceeds 15,000 acres.

Housing construction is proceeding throughout the boundless territory of this country and the life of the people is being made easier. New tram and bus lines are being commissioned, the streets and highways are being paved and asphalted.

Nearly 500 apartment houses and public buildings were erected in Minsk, capital of Byelorussia, in 1955. These include a picture gallery, a children's theatre, a conservatoire, and a circus for 2,000 spectators. A new house was opened for tenancy every three days.

In the Karaganda Coal Basin, Kazakhstan, 580 million rubles were spent on housing development in the first six post-war years. The people of the city of Karaganda received four and a half million square feet of

floor space. Other building projects included 13 schools, nine clubs, three palaces of culture, 64 children's, medical and other cultural and service establishments. A tram line was opened and many of the city's streets have been covered with asphalt.

The years 1954-55 alone witnessed the building of 337 new state-farm settlements in the steppes of Kazakhstan. Each of these settlements has a dining-room, a shop, a bakery, a bath-house, and a granary. Most of them have a club, a school, a medical centre and a crèche.

In less than 30 years, nearly 2,000 new towns and workers' settlements sprang up in this country.

Despite the tremendous scale of the construction work carried on by both the state and the population, there still is a serious housing shortage.

Construction development is being stepped up in the current (1956-60) five-year plan period, when two times more houses will be built in the towns. The state alone will build nearly 2,204 million square feet of floor space. Many houses will be put up by the people with the help of state loans.

This means that in the course of the sixth five-year plan period two flats totalling 849 square feet will be opened for tenancy every minute.

In the Soviet Union, everything is being done to achieve a sharp improvement in the housing situation within the next few years. With this goal in view, the Communist Party and the Soviet Government deem it necessary to put an end to all kinds of over-indulgence leading to rises in building costs, to extend the building of two- to five-storey houses, and to support the initiative of factory, office and other workers building houses themselves.

Everybody can understand how very difficult it is fully to meet the housing requirements of a huge population, especially if account is taken of the fact that in the years of its existence the Soviet Union had a few devastating wars forced upon it. However, the steadily mounting scale of housing construction is testimony of the Soviet people's determination to carry out this task as well.

STATE CONCERN FOR PUBLIC HEALTH

People are the prime and most precious wealth of socialist society. That is why for Soviet people the most terrible and irreparable loss in the Second World War was the quenching of millions of lives. Naturally, the war could not but affect the health of the population. However, the well-organized medical service during the war prevented any outbreak of epidemics, which in past wars carried away millions of human lives.

The Government annually spends large sums of money on public health. For example, in the 1957 budget the allocations for public health amount to 37,900 million rubles, which is three and a half times more than was spent for this purpose in pre-war 1940.

It is worth while mentioning that in 1913, the tsarist government spent an average of 69 kopeks per capita on public health. In 1937, the corresponding expense of the Soviet Government was 60 rubles 16 kopeks per capita.

In 1913, Russia had no more than 28,000 doctors. Today, there are 334,000 doctors, 900,000 doctor's assistants and other junior medical personnel. The number of medical schools has grown from 14 in 1913 to 70 in 1956.

The country now has some 250 medical research institutes. The medical service is being improved throughout the country and new polyclinics, hospitals and maternity homes are being opened.

Prior to the Revolution, the town of Yuzovka (present-day Stalino), the centre of the Donbas coal industry, had only one hospital staffed by one doctor, one doctor's assistant and one chemist, but by 1954 there already were 43 hospitals, 48 polyclinics, 78 medical centres, 20 children's polyclinics, more than 50 crèches, 19 out-patient clinics, 10 first-aid stations, a medical institute, and a research institute of labour hygiene and occupational diseases.

Before the establishment of Soviet rule in Rovno Region, Western Ukraine (i.e., prior to 1939), there were six doctors per 225,000 people. In 1954, this region had 529 university trained doctors and about 2,000 medical workers with a secondary education.

Pre-revolutionary Uzbekistan had one doctor per 31,000 people. Today, one doctor serves 895 people.

Formerly, a worker or a peasant had great difficulty in gaining admittance to a hospital. Before the Revolution, hospitals throughout Russia had accommodation for 207,000 patients, including 49,000 patients in rural localities. On the eve of the war (in 1940), these figures rose to 790,000 and nearly 200,000 respectively, i.e., they were more than quadrupled. In 1955, there was hospital accommodation for more than 1,290,000 patients.

Many new hospitals are being built in the Soviet Union. By 1960, there will be 2.8 times more hospital, out-patient hospital and maternity home accommodation than in 1955.

A great deal of attention is being devoted to the medical service at factories.

At the Likhachov Auto Works in Moscow, the staff of the polyclinic consists of 15 professors, 138 doctors, 227 doctor's assistants, midwives and nurses. It has X-ray, electrocardiograph and physiotherapy apparatuses. The functional diagnostics room is fitted with the most up-to-date equipment. There is also a well-equipped clinic diagnosis laboratory, a blood-transfusion station, mud baths, and a medicinal physical-training room. Wide use is made of the latest methods of treatment such as ozokerite, X-ray therapy, antibiotics.

In addition to the polyclinic, the works has 17 shop medical stations, two shop inhalation stations, and a dietetic dining-room. The workers and employees can spend their leaves at their own sanatorium near Riga, in a holiday home near Moscow, and at health resorts in the Crimea and the Transcaucasia. For the children of the workers and employees there are a sanatorium, a health camp, and crèches. Children requiring prolonged medical treatment are sent to a forest school that was opened by the works in a suburban locality. The works' medical and sanitation budget exceeds six million rubles annually.

Disease prevention is given much attention at the works. Every worker and employee is regularly examined by the doctors. When the necessity arises, workers are transferred to lighter jobs or given extraordinary leave and after some time are again medically examined. The out-patient hospital method gives the opportunity of constantly keeping the health of people under observation and of preventing diseases.

At many industrial enterprises medical workers are in attendance directly in the shops. The Azovstal Iron and Steel Works in Zhdanov has a doctor in every shop and

it is his duty to check the conditions in which the workers work and live and to adapt disease prevention methods to the conditions in the shops. The shops have shower-rooms, laundries, clothes-drying rooms, and hygiene rooms, while in the hot shops there are water curtains, powerful ventilators, and saturators with aerated water. The sanitary stations have first-aid kits, stretchers, and bandaging materials. The shop medical centres work round the clock.

The doctors working at industrial enterprises report on their work at meetings of the factory trade-union committees, the council of social insurance, at general meetings of workers and employees, and at meetings of the management. In these reports, they analyze the causes of diseases, tell what is being done to prevent them, and outline measures for further improving working conditions.

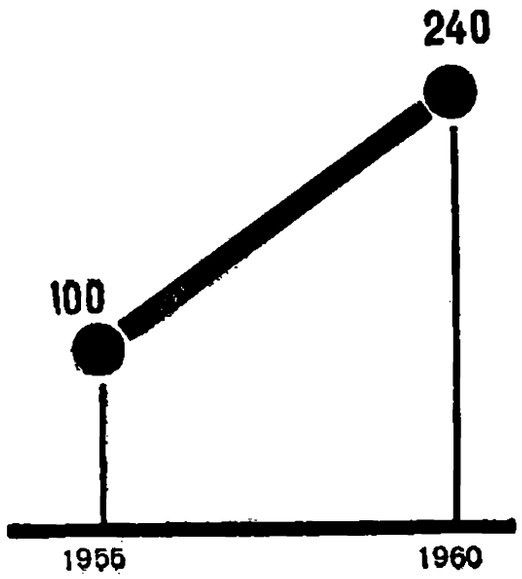
In the Soviet Union, there are many establishments whose job is to improve mother and child welfare. In 1954, the country had 11,900 women's and children's consultation centres.

All expectant mothers have the constant attention of doctors. An infant is kept under medical observation from the day it is born until it is a year old, and the doctors advise the parents on how to look after it. If the parents send their baby to a crèche, they pay about 25 per cent of the expenses connected with its upkeep. In 1955, there were more than 18,000 permanently functioning urban crèches which catered for nearly a million children. Seasonal crèches are opened in the collective farms every year during spring and autumn field work. These cater for more than two million children.

In spite of the huge number of children's establishments, there still is a shortage. For example, at the

beginning of 1956, more than 64,000 mothers could not find crèche accommodation for their children. The Sixth Five-Year Plan provides for the building of crèches with accommodation for 400,000 children, which will allow meeting the demand almost completely.

When a child reaches the age of three, its parents can send it to a kindergarten. Depending on their wage or salary, parents pay up to 50 per cent of the cost.



Growth in construction of kindergartens and crèches in 1955-1960.

Thanks to the excellently organized medical service and the utilization of the latest achievements of world medicine, occupational diseases have fallen sharply in the U.S.S.R., and many epidemic diseases—plague, smallpox, relapsing fever—which used to take a huge toll, have been liquidated.

The continuously falling death-rate in Soviet years is shown by the following comparative figures of the number of deaths per thousand people in the U.S.S.R. and other countries:

	1913	1927	1955
U.S.S.R.	30.2	22.8	8.4
France	17.7	16.5	12.0
Great Britain . .	14.3	12.5	11.7
U.S.A.	13.8	11.3	9.3

In 1956, the death-rate per thousand people fell to 7.7.

* * *

Soviet people are the masters of their country. They are vitally interested in the successful development of all branches of the national economy and in the strengthening of the economic might of their country, for they are aware that living standards depend on the development of the forces of production and on the growth of socialist production.

CULTURE

When in October 1917 the old regime collapsed and the workers and peasants came to power in Russia, bourgeois spokesmen began to hold forth on the "destruction of civilization," which they said to be inevitable in a state ruled by the people, and predicted a "cultural catastrophe" in Russia. Even certain progressive people in the West were concerned about the fate of culture in the Soviet country. Reality refuted the slanders of the former and dispelled the fears of the latter. Facts show that the socialist revolution in Russia, far from destroying culture, made it the property of the people and provided it with every opportunity for development.

Within a brief period illiteracy was eliminated in Soviet Russia, science and art made unprecedented progress, and the cultural standard of the people rose immeasurably. Books and newspapers, lectures and concerts, the theatre and cinema, museums and exhibitions, amateur art activities—all this has become part and parcel of the life of the Soviet worker and peasant, while in prerevolutionary Russia three quarters of the population could not so much as read and write. Many nationalities of the Far North, the East, and the North Caucasus were backward and ignorant, being totally deprived of education.

Under the tsarist regime only a few gifted commoners were able to develop their talents and rise to the summits

of culture. Among them were men of science and culture such as Mikhail Lomonosov, that versatile genius, the distinguished inventors Polzunov and Kulibin, the great Ukrainian poet Shevchenko, and the founder of proletarian literature Maxim Gorky. But for millions of workers and peasants the road to knowledge, to science and culture was closed.

The Soviet state did away with the exclusive right of the propertied classes to education and culture. It put within the reach of the workers and peasants all the educational establishments and all the fruits of material and spiritual culture: paper and printing-shops, newspapers and radio, libraries and museums, theatres and cinemas, clubs and palaces of culture.

In the sphere of culture, too, the Revolution did away with national inequality which had doomed many peoples of Russia to ignorance and backwardness. All the peoples of the U.S.S.R. were enabled to set up national schools, publish books and newspapers in their own language, and develop literature and art according to their national traditions.

The upbuilding of socialist culture was a very difficult task requiring much time and effort. The victorious proletariat lacked the necessary cultural forces in the early years after the Revolution. The population was predominantly illiterate, the survivals of mediaeval customs were still important factors, and religion still played a decisive role in the life of many peoples. The enemies of the Revolution sought to keep the people as far away from culture as before. Furthermore, the victorious people had inherited from old Russia as poor an economy as can be imagined.

In spite of all these difficulties the Soviet state succeeded in the cultural revolution, thanks above all to vigorous support from the masses, who were vitally interested in raising their cultural level.

Soviet culture owes its growth to the achievements of Russian and world culture, to the progress made by all the peoples of the U.S.S.R. It has assimilated the best and most progressive creations of man. Multi-national in form and socialist in content, it develops as a single culture.

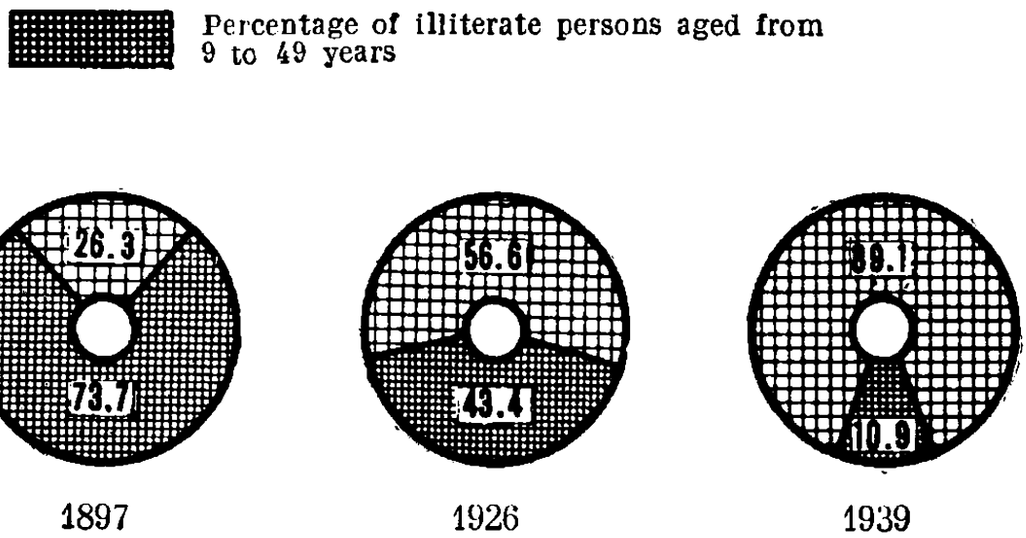
LAND OF UNIVERSAL LITERACY

The cultural revolution had to be begun from the elimination of the almost universal illiteracy. Late in 1919, at the height of the Civil War, the Soviet Government issued a decree signed by Lenin which said: "To enable the whole population of the republic to take a conscious part in the political life of the country ... the entire population of the republic aged from 8 to 50 years, who cannot read or write, are obliged to learn to do so, either in their native or in the Russian language, according to their choice."

The working people of town and country acclaimed the decree. Literacy schools and centres sprang up throughout the country. After the day's work millions of men and women bent over the first Soviet primers, following the lines with a finger as they read: "We are not slaves...." The workers and peasants were well aware of the importance of knowledge in the new life they were building.

With help from intellectuals, the workers and peasants set up a society called "Down with Illiteracy" in 1923. This voluntary society, headed by M. I. Kalinin, an outstanding Soviet statesman, did much to put an end to

illiteracy, particularly among the peasants. The very name of the society indicated that the working people of town and country were resolved to do away with cultural backwardness, inherited from the past, as speedily as possible. This ambitious programme was carried out owing to the initiative of the masses and to their unanimous endorsement of the government's educational measures.



Fighting illiteracy in the U.S.S.R.

People who only a short time before had not known how to sign their names were given a real chance to become educated.

By 1940 the literacy programme was practically fulfilled. Some 50 million adults had learned to read and write from 1920 to 1940.

Today there are thousands of highly qualified Soviet specialists and workers of science and art who were either semi-literate or completely illiterate before the October Revolution.

Gamer Ragimova was one of the thousands of backward and downtrodden women of the East. The wife of

an unskilled worker in Baku, she could not read or write and did not take off the veil until 1920. She was an adult woman when she began to read and write. She graduated from a higher school together with her daughter. Today she is a skilled engineer.

At a conference of Tajik intellectuals active in public affairs, held in November 1956, one could have noticed a tall, dark-complexioned woman in a grey suit with the badge of Deputy to the Supreme Soviet. She was civil engineer Hamra Tairova, described by the newspapers of the 'thirties as the "first Tajik engineer." This was sensational, for there were hardly any women in Tajikistan at that time who could read and write. Today Tairova is the Republic's Minister of Town and Village Construction.

The Yakut M. Yegorov was an illiterate and ignorant man at the time of the Revolution. In Soviet years he showed a great thirst for learning. His long and arduous quest for knowledge did not go unrewarded. An innovator in science and production, he won a Stalin Prize in 1952 by elaborating and introducing new methods of vegetable-growing on the collective farms of Yakutia.

TOWARDS UNIVERSAL SECONDARY EDUCATION

There were very few schools in Russia before the Revolution. In the non-Russian districts their number was ten times as small as in Russia proper. In 1913 four-fifths of the children and adolescents had no chance to go to school. In other words, education was inaccessible to millions of working-class and peasant children.

In 1914-15 grades 5 to 10 of all the schools of Russia

(in her present-day boundaries) providing a secondary general education had an enrolment of about 625,000. The student body of the higher educational establishments numbered 127,400.

The Soviet state made the secondary and higher schools accessible to the working people. While preserving all that was useful in the old schools, it thoroughly reorganized the entire school system. Soon after the Revolution the school was divorced from the church. All education and upbringing came to be based on a scientific world outlook. The old estate and class school was replaced by a working people's school. All the peoples of Russia acquired the right to learn in their native language and the opportunity to do so.

Universal elementary education was the most pressing task. By 1929-30 the number of children attending elementary school had reached 10 million. Universal elementary education, decreed in 1930, was implemented in three or four years. Incidentally, tsarist officials estimated that universal elementary education could not be enforced in less than 125 years.

Secondary education likewise developed apace. Prior to the Great Patriotic War universal seven-year education was introduced in the towns, and the groundwork was laid for it in the countryside.

The war which Nazi Germany forced on the Soviet Union was a great setback to the development of public education. The invaders burned or otherwise destroyed 82,000 elementary and secondary schools that had been attended by 15 million pupils.

After the war the Soviet people quickly rebuilt the schools and achieved further progress. Under the two post-war five-year plans (1946-55), more than 30,000 schools

were built. Once again all children and adolescents were enabled to go to school. In 1955-56 schools of all types numbered 30 million pupils. The introduction of universal seven-year education all over the country and of universal ten-year education in the towns is an important achievement. Although the enforcement of universal ten-year education in the countryside is still lagging behind, considerable results have been achieved there too. The number of pupils in the 8th-10th grades of the rural schools grew from 1,000,000 in 1940-41 to 2,370,000 in 1955-56.

Public education has gone a long way in the non-Russian Union republics.

There is an interesting document in the Tajik state archives—the first order issued in 1919 by the People's Commissariat of Public Education of the Tajik Republic. It reads: "To register all public education workers, school teachers and employees—altogether 31 persons—4 boarding schools and 3 elementary schools numbering 152 pupils." During the rule of the Emir of Bukhara in what today is the Tajik Soviet Socialist Republic there were all in all 10 elementary schools with 369 pupils. The emirate did not have a single secondary school. In 1955-56 there were more than 2,500 elementary, seven-year, and ten-year schools in the Tajik Republic, attended by 320,500 pupils.

The vast northern territories of the Eurasian continent, stretching from the Norwegian border to the Bering Strait, are inhabited by nationalities of the Soviet Far North. Before the Revolution they had not the slightest notion of school. Today the seven national areas of the Far North have more than 600 schools teaching more than 40,000 children. Two hundred boarding schools

provide free tuition and upkeep at state expense for 7,000 native children.

Here is an example from the Moldavian Republic, which occupies the southwestern corner of the U.S.S.R. In Grigoriopol District, on the bluff bank of the Dniester, lies the large collective-farm village of Tashlyk. Today there is not a single illiterate person there, though before the Revolution only a few could read and write. People of new trades have appeared in Tashlyk: mechanics, radio-operators, grain-combine and tractor drivers. The village has dozens of specialists with a secondary or higher education. Some 200 young men and women of Tashlyk are studying in various colleges in or outside the republic.

All the other non-Russian republics of the U.S.S.R. present the same picture.

The progress made by the Soviet people in public education is obvious, but there is much to be done yet. The rapid development of science and technology in the U.S.S.R. calls for greater numbers of educated, technically competent people, and this confronts the Soviet school with new tasks.

The Twentieth Congress of the C.P.S.U. outlined the following plan for the next five years:

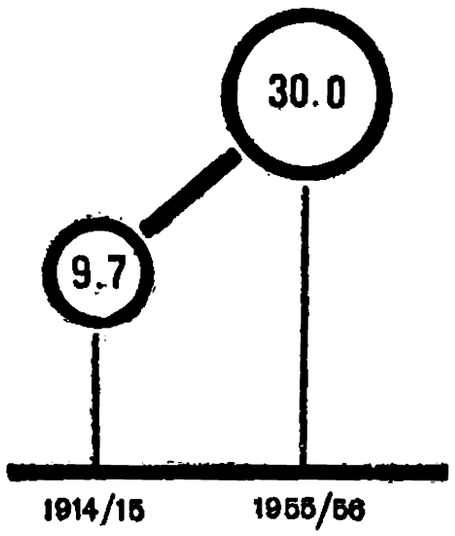
"Universal secondary education, both general (ten-year) and specialized, to be introduced, in the main, in urban and rural localities."

During the sixth five-year plan period the secondary ten-year schools will graduate 6,300,000 pupils, or two and a half times as many as during the previous five years. The volume of school construction will be doubled.

The network of boarding schools will be considerably enlarged. In 1957 they are training 165,000 pupils.

The Soviet state annually increases expenditures for public education. In 1940 it spent 23,200 million rubles; in 1956 expenditures were as high as 73,100 million rubles.

Soviet society is concerned with the problem of polytechnical training, which Lenin described as a basic principle in the life of the Soviet school.



Number of pupils in Soviet schools (in millions)

For a long time the general-education schools prepared the pupils for higher studies but not for practical life and participation in production.

During the fifth five-year plan period the first steps to polytechnical training were made in the schools: curricula and programmes were revised, practical courses in work-shops were introduced. Work-rooms and work-shops were set up in many schools. By 1956 there were 15,000 polytechnical work-shops and work-rooms functioning in the Russian Federation alone.

However, as the Twentieth Congress of the C.P.S.U. pointed out, "the introduction of polytechnical training in a short space of time requires not only addition to the curricula of new subjects acquainting the student with the rudiments of industrial and agricultural production, but also that the student be accustomed to practical work in factories, collective and state farms, experimental plots and school work-shops."

These instructions of the Party Congress are being carried out.

CULTURAL PROGRESS IN TOWN AND COUNTRY

The Soviet Union's effort to promote the cultural standards of the working class and the peasantry involves not only the children or adolescents who go to elementary or secondary school. The fact is that, besides the normal school system, there is a ramified network of schools for the working-class and peasant youth. These schools give their pupils in their off hours a general education on the lines of the seven-year and ten-year normal schools.

This form of education has become extremely widespread. In 1944-45 there were 2,210 such schools, numbering 348,400 pupils. In 1955-56 the figures were 6,637 and 1,387,000 respectively. In recent years more than a million young people have finished these schools in the R.S.F.S.R. alone.

The workers also broaden their educational, cultural and technical horizons at various courses, at vocational schools and by independent study. The various agronomical and veterinary schools and courses set up in the countryside annually help millions of peasants acquire knowledge and improve their skills.

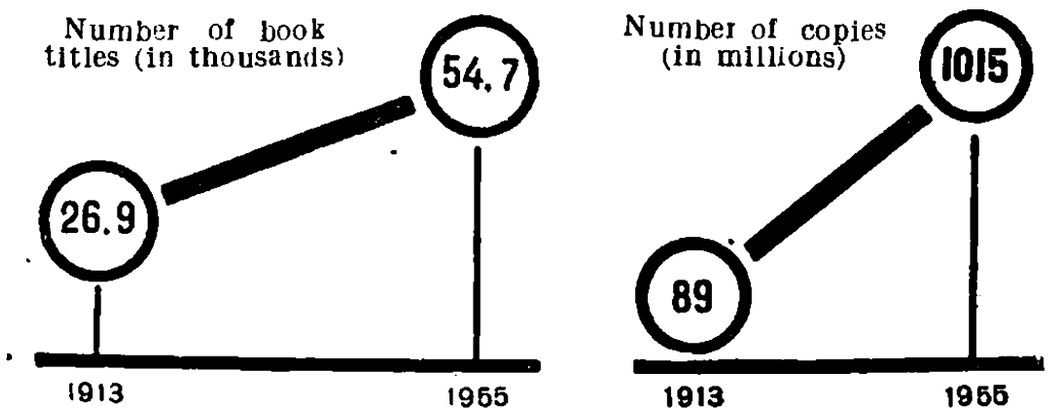
A new type of working man has come into being in the Soviet land. The foremost workers and peasants are men and women with keen social interests, versatile knowledge, and a creative attitude towards their work.

Many workers and peasants write for the press and even publish books about their work. Among them are Rossiisky, Korabelnikova, Kolesov, Bykov, Angelina, and many other innovators. They often deliver lectures to students, and some of them are members of college scientific councils. On a par with outstanding men of science and culture, government awards have been

conferred upon thousands of advanced workers and collective farmers for furthering technical progress and for their achievements in improving production methods.

One of the striking features of cultural progress is, no doubt, the high rate at which books, the chief source of learning, have been gaining popularity among the broad masses.

Under the Soviet system book-publishing developed by leaps and bounds. During the 400 years after the appear-



Book-publishing in the U.S.S.R.

ance of the first Russian printed book till the October Revolution, about 550,000 book titles were published in Russia. During a period of 37 years—from 1918 to 1955—1,268,000 book titles were published in a total of more than 18,000 million copies. In 1955 the central and local publishing houses put out more than 54,000 book titles. At present over 1,000 million copies of books and pamphlets are annually published in 122 languages of Soviet and foreign peoples.

In addition to a large number of social-political and scientific works, fiction and poetry are published on a big scale. In 1955 fiction titles came out in a total of 287

million copies, of which Russian literature accounted for 175 million, non-Russian Soviet literature 40 million, and foreign literature 71.5 million copies.

The Soviet state sees to it that books are properly distributed among the working people of town and country.

In 1939 the number of scientific and public libraries in the U.S.S.R. was 241,000, their book stock totalling 443 million volumes. By 1956 the number of libraries had grown to 392,000 and their total book stock to 1,300 million volumes.

In Soviet years the old libraries, many of which were in a deplorable state before the Revolution, were replenished and extended. Hundreds of thousands of new libraries were set up. A public library was founded in 1837 in the town of Vyatka (later renamed Kirov) on the initiative of the writer and revolutionary democrat A. Herzen, whom the tsarist government had exiled to that town. This library had to battle against great odds; the local press referred to it as a "dying institution." Today it is one of the country's biggest libraries, with a book stock that has increased 43 times over since the Revolution and with 160 times as many readers as it had before the Revolution.

The public library in Tashkent, founded in 1870, was frequented only by a few people before the Revolution. It has since become the Uzbek State Public Library, which is visited by a daily average of 500 to 600 readers.

The Lenin State Public Library of the U.S.S.R. in Moscow, is one of the world's greatest book collections. It numbers more than 19 million books in 160 languages, of which 2,200,000 copies are foreign editions. The library contains some 300 unique manuscripts. Its rare books de-

partment includes the first editions of books published in Moscow in the middle of the 16th century and a rich collection of books printed before that century. The manuscript department keeps autographs by nearly all the classic Russian writers. The countries of the East are represented by Chinese scientific literature, books in Japanese, Arabic, Korean, Persian, Hebrew, Sanskrit, Mongolian, and other languages. A priceless collection of periodicals published by Russian revolutionary organizations abroad or in underground printing-shops at home include Herzen's *Kolokol* (*The Bell*) and *Polyarnaya Zvezda* (*Polar Star*) and files of Lenin's *Iskra* (*Spark*). The collection of Soviet books numbers up to a million titles in dozens of languages of the peoples of the U.S.S.R. and in 40 foreign languages.

Some 5,000 readers daily visit the Lenin Library. There are reading-rooms assigned to scientists, engineers, writers and artists. The library also has reading-rooms for children. Thousands of readers in all parts of the Soviet Union receive books from the Lenin Library through the inter-library exchange system.

The library replenishes its stock with foreign books describing the latest achievements of world science, technology, and art. It exchanges books with hundreds of institutions in 60 countries.

Besides the large public and scientific libraries, there are many small libraries at clubs, factories, collective and state farms, machine and tractor stations, and offices. In 1955 the number of rural libraries totalled 119,000, with a stock of over 300 million volumes. Many peasants collect books at home.

Newspapers and magazines are very popular. Before the October Revolution Russia (in terms of her present-

day territory) published 1,055 newspapers in 3,300 thousand copies. In 1955 the figures were 7,246 and 48 million respectively.

In old Russia newspapers came out in 24 languages; in the U.S.S.R. they are published in 57 languages. In the pre-revolutionary Ukraine only one newspaper appeared in the Ukrainian language, while the Kirghiz, Tajik, Turkmen, and certain other peoples had no newspapers of their own. In Soviet times the picture has changed beyond recognition: in 1955 more than a thousand newspapers were published in the Ukraine, 90 newspapers in Kirghizia, 70 in Tajikistan, 69 in Turkmenia.

The *Pravda* (*Truth*), published by the Central Committee of the Communist Party of the Soviet Union, is the leading Soviet newspaper. It appears in a total of five million copies. In 16 of the largest cities it is printed from matrices flown by plane. One indication of the *Pravda*'s close contact with its readers is the hundreds of letters it receives daily.

In 1955 more than 2,000 magazines were published in 51 languages and over 360 million copies.

In spite of the large editions in which magazines are published, such popular weeklies and monthlies as the Sunday pictorial *Ogonyok*, the magazine for women *Rabotnitsa*, and the satirical *Krokodil* are still hard to subscribe to. The current Five-Year Plan provides for a considerable increase in the output of books, magazines, and newspapers and for more attractive make-up and higher publishing standards.

Radio is widely used in town and country. It links the capital with countless towns and villages of the boundless Soviet land, with new settlements on what yesterday was virgin soil, polar stations, and ships far out in the

seas and oceans. Today more than 30,000 radio centres are operating in the U.S.S.R., servicing nearly 20 million radio relay posts. The population has millions of radio sets. The radio stations broadcast in 46 languages of the Soviet peoples and in 30 odd foreign languages. In the next few years broadcasting capacities will be increased by nearly 90 per cent.

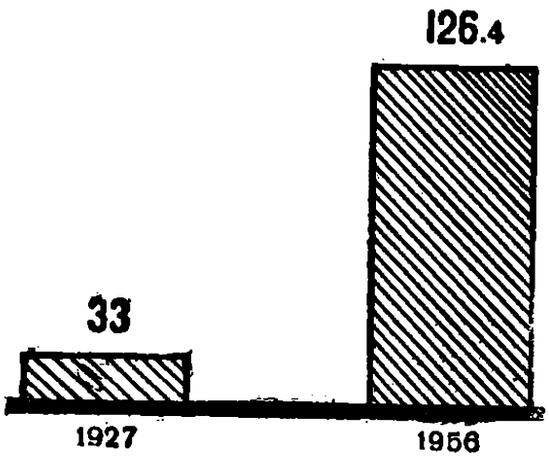
Television plays an ever greater part in cultural life. Three years ago there were only two telecasting centres—in Moscow and Leningrad. Today such centres are operating also in Kiev, Kharkov, Riga, Tallinn, Sverdlovsk, Minsk, Omsk, Vladivostok, Tomsk, Gorky, Tbilisi, Baku, and other cities. By 1960 their number will be 75. There are many millions of people in the country today who own TV sets, and their number is growing every year. Soviet industry is putting out increasing numbers of TV sets such as "Temp," "Avangard," or "Ekran," which are in great demand. Production is contemplated of sets with a screen 90×120 centimetres.

The cinema enjoys immense popularity.

In tsarist Russia (within the country's present-day boundaries) there were only 1,510 cinema projectors, 142 of which were installed in rural areas. The population of worker's districts, villages, and especially the national borderlands had no chance to see motion pictures. In 1956 the Soviet Union had over 60,000 cinema projectors, 46,700 of which were installed in the countryside. Special attention is being paid to the improvement of cinema facilities in the non-Russian republics. Byelorussia, for example, has 2,105 cinema projectors. The number of rural cinema projectors installed in the Tajik S.S.R. is nearly twice as great as that of rural cinemas in tsarist Russia.

In 1955 every Soviet citizen, including children, went an average of 12 times to the cinema. However, the number of cinema theatres is still inadequate, as is also the film output.

By the end of the period covered by the Sixth Five-Year Plan the cinema network will be considerably expanded. Not less than 120 full-length motion pictures will be put out every year.



Increase in number of clubs (in thousands)

A broad network of club-houses has been set up. Nearly every Soviet town has a palace of culture or a workers' club which conducts diverse educational and recreation activities, such as political and scientific lectures, concerts, literary discussions, or film and play shows. The palaces and clubs also run various hobby circles. They also do a great deal to popularize the experience of innovators in production.

The rural clubs are no less active. To cite an example, the house of culture of the Red East Collective Farm, Kirghiz S.S.R., held 305 film shows during the first half of 1955, of which 37 were held in the fields, 24 lectures, and two readers' conferences. Six meetings were called to exchange agricultural experience. All the non-Russian republics have networks of rural clubs. Uzbekistan has 3,000 village clubs and Turkmenia over 800.

The clubs do much to promote amateur art. Amateur art groups involve about five million people. Some 200 million people attend their performances every year.

The Ukraine alone has over half a million amateur singers and musicians, and 70 amateur opera companies. Byelorussia numbers 9,000 amateur art groups functioning at regional houses of culture, rural clubs, and village reading-rooms. The peoples of the Baltic region have glorious traditions of long standing in amateur art. Song festivals have been a regular event in Estonia since 1869. Over 35,000 folk singers and dancers took part in the Song Festival of 1955 dedicated to the fifteenth birthday of the Estonian Soviet Socialist Republic.

The trade unions conduct amateur art reviews at regular intervals. Some three million people participated in these reviews in 1956. Three thousand of the most gifted amateur performers won the privilege of taking part in the final concert at the Bolshoi Theatre in Moscow.

Besides musical works by Russian and foreign classics and Soviet composers, the repertoires of amateur orchestras and choirs include works by amateur composers. One of the highlights of the closing concert in Moscow was songs sung by the Russian Folk Choir of the town of Vologda. The songs were composed by members of the choir.

Amateur art provides professional singers and actors. People's Artistes of the U.S.S.R. Lemeshev and Davidova, singers both, the actor Mordvinov, the Bolshoi Theatre soloists Borisenko, Sokolova, Parkhomenko and many other famous Soviet singers and actors began their careers in amateur art circles.

INTELLECTUALS ARE TRAINED FROM THE PEOPLE

Immediately after the October Revolution the Soviet state was confronted with the problem of training specialists to organize a socialist national economy. This problem

was solved in two ways: by drawing the old specialists into socialist construction and by training new specialists from the ranks of the working people.

Many members of the old intelligentsia began to cooperate with the workers and peasants in building the new society. Right after the Revolution the foremost Russian intellectuals, including Timiryazev, Michurin, Williams, Zhukovsky, Gubkin and others, placed themselves at the service of the people.

Cadres of intellectuals had to be urgently trained because numerically the old intelligentsia was very small. In 1913 Russian industry had only 7,880 engineers and technicians with a higher education. Hundreds of thousands of engineers, agronomists, teachers, physicians, workers of science and art were needed for the rapid development of the national economy and culture.

The Soviet state undertook a basic reorganization of the higher school. New entrance regulations, decreed in 1918, put the higher school within the reach of workers and peasants. The decree also provided for allowances ("stipends") and living quarters for the students.

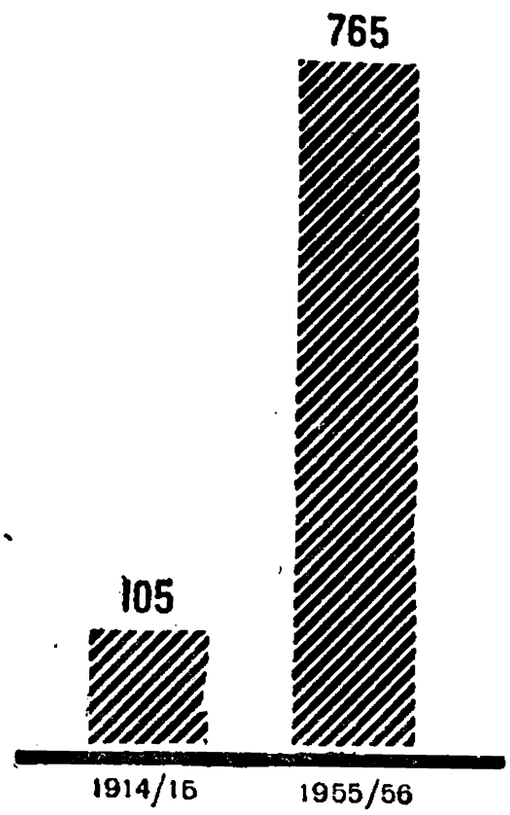
Special schools—Workers' Faculties—were opened for training workers and peasants for the higher schools. They played an important part in training the new intelligentsia. In 1934 as many as 40 per cent those entering the higher schools had graduated from Workers' Faculties.

The social composition of the Soviet higher school changed radically. On the eve of the October Revolution, the Petrov Academy (now known as the Timiryazev Agricultural Academy) had an enrolment of 1,322, which included two princes, one baron, 165 hereditary nobles, five nobles, 196 sons of army officers, 94 sons of clergy-

men, 69 hereditary honorary citizens, 23 honorary citizens, 73 sons of merchants, 290 persons of lower middle-class origin, 37 Cossacks, and 322 sons of kulaks. In 1939 the Academy's student body consisted of 636 workers, 826 collective-farm peasants and 652 office workers.

The university and institute (college) network expanded rapidly. In 1914-1915 Russia within the present borders had 105 higher schools with a student body of 127,400. In the U.S.S.R. in 1940-1941 there were 817 higher schools with 812,000 students.

In 1955-1956 the number of higher schools reached 765,* and the student body 1,867,000, i.e., double the pre-war figure.



Increase in number of institutions of higher learning

Higher education in the Soviet Union is available to all nationalities. Higher schools opened for the first time in Byelorussia, Armenia, Kirghizia, Uzbekistan and other republics in Soviet times. There is no Union republic without a university and other higher schools.

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* In post-war years dozens of new higher schools were opened, but the student body decreased because of the closing of the teachers' institutes which trained teachers for the 5th-7th grades of the secondary school. Now all teachers receive training for the ten-year secondary school at higher pedagogical schools.

Women enter Soviet higher schools on equal terms with men. By 1928, 28.1 per cent of the total student body in the country were women, and by 1956 their percentage had risen to 52.

The Moscow State University, named after Lomonosov, exemplifies the attention being given to scientific progress by the state. It is a veritable palace of science offering all facilities for studies and research. It celebrated its bi-centenary in 1955. Since it was founded it has trained over 80,000 specialists, of whom more than half graduated in Soviet times.

The Moscow University has 12 departments with a student body totalling 15,500 and a teaching staff of about 2,000 professors, instructors and scientific workers. Students of 59 nationalities of the Soviet Union, the People's Democracies and of other countries study and live within its walls.

With every passing year the Soviet higher and specialized secondary schools graduate more and more specialists in various fields of economy and culture. The Soviet Union trains nearly twice as many specialists as do Great Britain, France, Italy and the other West European capitalist countries put together. In 1956 alone it trained over 760,000 engineers, technicians, teachers, etc.

The growth of the intelligentsia is making particularly rapid progress in the national republics. Uzbekistan, which before the Revolution did not have a single Uzbek engineer, in 1956 had 125,000 specialists with a higher or secondary education. In comparison with the pre-war period the number of specialists with a higher education increased in Kazakhstan 3.8 times, in Kirghizia, 4.8 times, in Tajikistan and Moldavia, 3.4 times, in Turkmenia, 3.3 times, and in Estonia it nearly trebled.

Prior to the Great Patriotic War the Soviet intelligentsia numbered in its ranks approximately 12 million. In post-war years this figure roughly doubled.

The country's demand for efficient captains of industry and agriculture is growing. During the sixth five-year plan period the higher and specialized secondary schools will graduate about 50 per cent more specialists than during the previous period and nearly twice the previous number for heavy industry, construction work, transport and agriculture.

The distribution of the higher schools over the country will be greatly improved. The training of specialists must be closely linked with the needs of production.

A good deal has already been done. Prior to the Revolution there were only four higher schools in the East of Russia. Now the Soviet East has 200 higher schools, which in 1955 alone graduated 49,000 specialists.

In the sixth five-year plan period higher schools will be opened in Novosibirsk, Irkutsk, Krasnoyarsk, Khabarovsk, Stalinabad, Akmolinsk and other towns. The higher schools existing in the East are to be extended and improved. By 1960 the student body of the Eastern higher schools will reach 500,000, and they will graduate up to 83,000 specialists annually.

SOVIET SCIENCE

Russia gave the world many outstanding scientists who made great discoveries. Lobachevsky, Kovalevskaya, Popov, Stoletov, Zhukovsky, Mendeleyev, Sechenov, Pavlov, and others are known far beyond the borders of their native country. But the tsarist government did not afford the scientists and scientific

institutions adequate material support and they were therefore unable to conduct research on an extensive scale. The electric arc lamp invented by P. Yablochkov did not find recognition in Russia and was first used in Paris. Yablochkov himself, the inventor of "Russian light" as the French called electricity, died in poverty. A similar fate befell many other outstanding Russian scientists and inventors including Tsiolkovsky, Mozhaisky and others under tsarism.

The Soviet system brought a radical change into the status of scientists and inventors. They enjoy universal respect and are supported by the state. I. Michurin, the great transformer of nature, wrote on the eve of the 60th anniversary of his scientific activity: "Soviet power has made the miserable plot of land on which sixty years ago I started work on evolving new sorts of fruit-berry plants and creating new plant organisms into an enormous all-union centre for industrial fruit-growing and scientific plant-growing with thousands of hectares of orchards, splendid laboratories, staffed with dozens of highly qualified scientists . . . The Communist Party and the working class have provided me with all facilities, with all an experimenter can wish for. The dream of my life is coming true ..."

Many other scientists of the old generation who began working before the Revolution have the same story to tell.

The Soviet state encouraged and supported the old scientists. It also did everything to assist workers and peasants who showed aptitude to become scientists or inventors. As a result hundreds and thousands of ordinary people acquired knowledge and became prominent men in science, something which would have been impossible

in tsarist times. Here is one example of many. V. Kuprevich was one of the sailors of the Baltic Fleet who heroically fought for Soviet power in Petrograd during the armed uprising in October 1917. Today he is an outstanding botanist and President of the Byelorussian Academy of Sciences.

Soviet power has created vast opportunities for the advancement of science. At the start of the First Five-Year Plan the country had 1,263 research institutes, laboratories and other scientific institutions. In 1956 the figure was 2,797.

One can judge of the scale of Soviet research by the composition of the U.S.S.R. Academy of Sciences founded in 1724. In 1925 it was staffed by a little over 1,000 scientific workers, and in 1956, by over 12,000.

The Academy has a ramified network of scientific institutions. It has branches in Moldavia, Karelia, Tataria, Bashkiria, Yakutia, Daghestan, the Primorye Territory, Sakhalin, the Urals, the Kola Peninsula. It associates 34 research institutes, has about 80 independent departments and laboratories, eight botanical gardens, a number of experimental stations, a reservation and other scientific and auxiliary institutions.

There are academies of sciences in 13 Union republics with 262 research institutions.

All the national republics now have their own scientists many of whom are known abroad. Among them are the biochemist Palladin (Ukraine), the geologist Satpayev (Kazakhstan), the astrophysicist Ambartsumyan (Armenia), Muskhelishvili (Georgia), a specialist in mathematics and mechanics, and others.

In comparison with pre-war years the number of scientists in Azerbaijan and Latvia has more than doubled, in

Kazakhstan it has increased by more than 150 per cent; in Estonia, nearly trebled, in Lithuania, more than trebled.

Many scientific institutions work hand in hand with industrial or agricultural enterprises, helping them improve production. The Paton Electric-Welding Institute of the Ukrainian Academy of Sciences maintains close ties with nearly 700 enterprises which use its new welding method. The close bonds existing between science and agricultural production and the role science plays in the advancement of farming can be seen from the fact that 534 research institutions were marked out to be represented at the 1954 Agricultural Exhibition along with the best collective farms, machine and tractor stations and state farms.

Soviet science made great progress after the war. One of its outstanding achievements was the rapid solution of the problem of using atomic energy for peaceful purposes. The first atomic power station went into operation in the U.S.S.R. in June 1954.

Radioactive isotopes are being used more and more in industry, agriculture, biology and medicine. "Tracer atoms" occupy a prominent place in scientific research and find widespread application. Science and production require great quantities of radioactive isotopes. Accelerators of charged particles are essential for obtaining adequate isotopes and for other purposes linked with the evolution and utilization of intranuclear energy. A team of Soviet physicists has elaborated a new principle for the acceleration of these particles, which was applied in the construction of a powerful synchrocyclotron of 680 million electronvolts. An accelerator (synchrocyclo-

tron) of 10,000 million electronvolts, the largest in the world, has been put into operation.

Atomic energy is being used more extensively in Soviet industry and agriculture. The U.S.S.R. readily shares its experience in this field with other countries, supplying them with atomic reactors as part of scientific and technical cooperation. The successes of the Soviet Union in the peaceful uses of atomic energy have won universal recognition.

Lately Soviet scientists have been paying great attention to semi-conductors. Thanks to the theoretical research of Academician A. Ioffe and his school highly efficient semi-conductors, photocells and thermal elements have been obtained, which directly transform the energy of heat and light into electricity. Powerful semi-conductor rectifiers have been manufactured for transforming alternating current into direct current. Radio and TV sets and automatic devices have been designed in which the electronic valves are substituted for cheaper, more compact and durable semi-conductor cells.

Soviet scientists have made considerable headway in the field of high-speed electronic computers and automatic controls for production operations, the mechanization of labour-consuming work, chemistry, etc. In 1956 Academician N. Semyonov was awarded the Nobel Prize for outstanding work in the investigation of chemical reactions. This fact mirrors the universal recognition of the achievements of Soviet physics and chemistry.

During the last four years a number of new research institutions have been established in the Soviet Union, including the Institute for Nuclear Problems, the Electrophysics Laboratory of the U. S. S. R. Academy of Sciences, and the Tashkent Institute of Nuclear Physics of the

Uzbek Academy of Sciences—the first research institute of its kind in the Soviet East.

The achievements of Soviet science are indisputable. But communist construction confronts scientists with new difficult problems which they must solve during the current five-year period.

LITERATURE AND ART

A rich legacy has been inherited by the Soviet people in the field of literature and art, primarily Russian classical literature, music, paintings, brilliant examples of stage art.

The October Revolution made accessible to millions of workers and peasants the immortal creations of Tolstoi and Gogol, Pushkin and Lermontov, Chekhov and Saltykov-Shchedrin, Glinka and Chaikovsky, Surikov and Repin, and other classics of Russian literature and art, and it opened up to the people the treasure-house of world culture.

In Soviet times the works of Pushkin have been published in 81 languages in over 73 million copies; the works of M. Saltykov-Shchedrin, in 36 languages, in over 17 million copies; the works of Lev Tolstoi, in 75 languages. Between 1918 and 1956 the books of Maxim Gorky were published 2,279 times in 73 languages, in a total exceeding 85 million copies. In 1955 alone, 2,900 titles of Russian fiction were published in a total of nearly 174 million copies.

The best specimens of world literature have become part and parcel of the cultural life of the Soviet people. Works by classical and modern progressive writers of France, Great Britain, the United States, Italy, China,

India, and many other countries are published and reprinted regularly. Under the Soviet system the works of over 1,700 foreign writers were published in editions totalling more than 360 million copies. Books by British writers have been translated into 53 languages of the Soviet peoples; by American writers, into 50 languages; by Chinese writers, into 31 languages; by Polish writers, into 26 languages, etc. Translated works of foreign classics are now read by Yakuts, Buryats, Maris and members of other nationalities who before the Revolution had no written language.

Books by foreign authors are published in large editions.

Works by Shakespeare have been published in 25 languages in editions totalling several million copies; books by Daniel Defoe, in 36 languages in more than 3,500,000 copies; by Charles Dickens, in nearly five million copies; by Balzac, in 6,500,000 copies. The popularity of Jack London can be judged by the fact that his books have appeared in a total exceeding 15 million copies.

Many Soviet people wish to read foreign literature in the original and the Foreign Languages Publishing House in Moscow publishes the works of many foreign authors in large editions.

Stephan Heym in his book *A Trip to the Country of Unlimited Opportunities* writes: "Dickens, Thackeray, Mark Twain, Dreiser and other well-known British and American writers are also published in the Soviet Union in the English language, those by German writers, in the German language, by Spanish and Latin-American authors, in Spanish, and these editions which should have been 'connoisseur editions' are so large that they would be sensational in the author's own country."

Soviet literature is making steady progress. By 1934 the Union of Soviet Writers had about 1,500 members; by the Second All-Union Congress, held in 1954, its membership was 3,695.

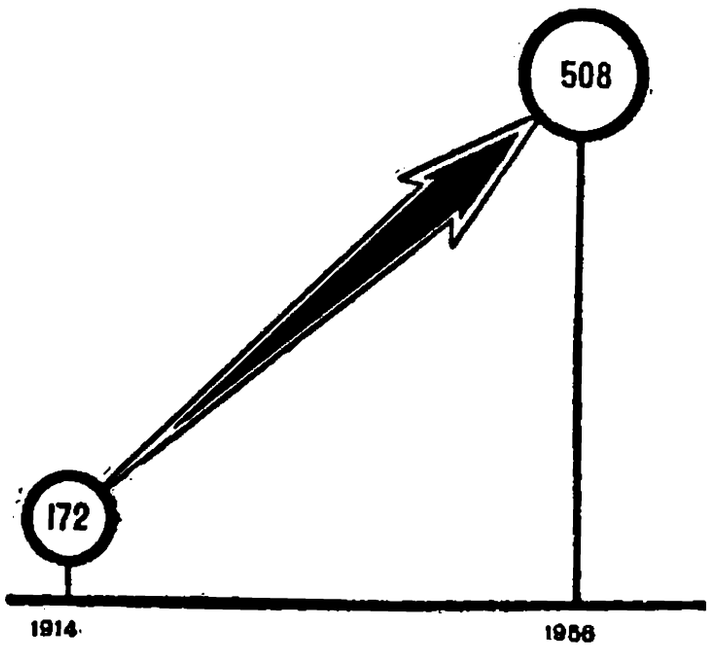
Many works of the Soviet Union's multi-national literature are known abroad. They include prose or poetry by the Russians: Gorky, Mayakovsky, A. Tolstoi, Sholokhov, Furmanov, N. Ostrovsky, Fadeyev, Gladkov, Fedin, Leonov, Surkov, Simonov, Tikhonov, Tvardovsky, Ehrenburg and Pogodin; the Ukrainians: Korneichuk, Rylsky and Gonchar; the Byelorussians: Kupala, Kolas and Krapiva; the Kazakh Auezov; the Azerbaijanian Ragim; the Lett Lacis; the Estonian Jakobson, and many others.

In Kirghizia, where the first local fiction book was published in 1924, there are now some 70 writers. In the Mari A.S.S.R., 134 books by local writers have appeared during the twenty years since the First Congress of Soviet Writers. The Tuvinians, whose written language did not come into being until the 'thirties, now have a prominent writer Salchak Toka, the author of the popular *Story of a Poor Man.* In Daghestan, whose peoples acquired written languages after the Revolution, a literary and art almanac entitled *Friendship* is published in the Avar, Dargin, Lesghin, Kumyk and Lak languages.

In 1934, 1,200 titles by writers of various Soviet nationalities (except Russian) were published in a total of 7,100,000 copies. In 1954 as many as 2,000 titles appeared in 35,800,000 copies.

Music has become accessible to the entire people. Russian and world classical music is exceedingly popular. The numerous concert halls are filled to capacity with people who enjoy music by Chaikovsky and Rakhmaninov,

Chopin and Mozart, Beethoven and Grieg. The Soviet Union has 22 conservatoires, about 120 professional music schools, some 50 major symphony orchestras, many thousands of music groups. Hundreds of songs, cantatas, symphonies, and other pieces have been written by Shostakovich, Prokofyev, Alexandrov, Glier, Duna-



Increase in number of theatres

yevsky, Zakharov, Kabalevsky, Khachaturyan, Khrennikov, Shaporin, Babajanyan, Dankevich, Kapp, Kara-Karayev. Soviet musicians invariably take part in international festivals and competitions.

The theatre plays an important role in the cultural life of the Soviet people. Over 500 theatres function in the country. The dream of progressive art workers of the past has come true—the theatres are open to the people—to workers, peasants, soldiers and students. In 1955 their attendance came to 78 million. There are also many amateur theatrical societies which perform at factories, in offices or on collective farms.

In Soviet times many nationalities—Tajiks, Turkmens, Kirghiz, Tatars, Bashkirs, Chuvashes, Maris and others—set up their own theatres. Literature and art festivals of the sister republics are held in Moscow. They enjoy great popularity.

Guest artistes perform not only at major theatres and in concert halls but also at the clubs of factories and schools. Their performances and concerts are often broadcast on radio and TV programmes. During the festival literary works are discussed and writers of different Soviet nationalities meet with their Moscow colleagues and readers.

In 1955 and 1956 literature and art festivals of Byelorussia, Turkmenia, Latvia, Armenia and Estonia were held in Moscow.

The Bolshoi is the Soviet Union's leading music theatre. It continues the realistic traditions of Russian music and the Russian stage. Besides producing the best works of Russian and world classics, the theatre has created a new Soviet opera and ballet repertoire. The ballets *Red Poppy* and *The Bronze Horseman* by Glier, *Flames of Paris* and *Fountain of Bakhchisarai* by Asafyev, *Romeo and Juliet* by Prokofyev and other works of Soviet composers have won general admiration.

The achievements of the Bolshoi Theatre are bound up with the names of Chaliapine, Sobinov, Nezhdanova and other great singers. The theatre owes much of its fame to artistes of the Soviet period—the singers Obukhova, Barsova, Kozlovsky, Pirogov, Reizen, Mikhailov, Lemeshev, and the ballet dancers Semyonova, Ulanova, Lepeshinskaya, Plisetskaya, Koren, Preobrazhensky, Farmanyants.

The theatre's troupe numbers some thousand people.

Its choreographic school trains many gifted young dancers.

The Moscow Art Theatre, founded by K. Stanislavsky and V. Nemirovich-Danchenko, the Maly Theatre, which continues the classical traditions of the great Russian actor Shchepkin, and the Kirov and Pushkin theatres in Leningrad play an outstanding role in the development of Soviet theatrical art.

Excellent theatrical troupes have also sprung up in other towns, such as the Opera and Ballet Theatre in Novosibirsk, the Musical Comedy Theatre in Sverdlovsk, the Opera and Ballet Theatre in Kiev.

The best theatres tour the country or go abroad every year.

The cinema is the most widespread and popular Soviet art. *The Battleship Potemkin*, *Chapayev*, the Maxim trilogy, *We Are From Kronstadt*, *Lenin in October*, *Lenin in 1918*, *Peter the First*, *The Circus*, *Volga-Volga*, *The Young Guard*, *Musorgsky*, *Taras Shevchenko*, *A Great Family*, *Romeo and Juliet* and other films are among the cinemagoers favourites.

Among the best-known Soviet artists are Nesterov, Baksheyev, Grekov, Brodsky, Grabar, Yuon, Gerasimov, Plastov, Konenkov, Shadr, Mukhina, Vuchetich, Kibrik, Shmarinov, the Kukriniksy (Kupriyanov, Krylov and Sokolov), Chuikov, Saryan, Yablonskaya, Azgur, Tansykbayev, Skulme and others. Decorative and applied folk art has become widespread.

There are 862 museums in the Soviet Union, including 31 revolutionary-history, 62 history and 115 art museums. In 1955, 35 odd million persons visited them. The State Hermitage and the Russian Museum in Leningrad and the Tretyakov Gallery in Moscow which contain immortal

works by Russian and West-European masters are world renowned. The Tretyakov Gallery is one of the largest Soviet museums. It widely propagates true to life, democratic art and carries on important research and restoration work. It is visited daily by about 4,000 people, a figure which shows how greatly the Soviet people appreciate art.

All-Union art exhibitions are arranged in Moscow annually.

PHYSICAL CULTURE AND SPORTS

Physical training of the people and sports are an integral part of Soviet culture. Physical culture and sport involve millions of people—a result of the cultural revolution that has taken place in the country.

Every factory, school or collective farm has its sportsmen, its sports sections. Early in 1956 there were approximately 200,000 physical-culture groups in the Soviet Union with a membership of 17,500,000. There are 38 sports societies and 992 sports training schools. The trade unions run 4,500 large sports grounds.

The ranks of the Soviet sportsmen are growing: 17 million sportsmen and sportswomen of 40 nationalities contended for the privilege of taking part in the finals of the all-Union meet held in Moscow in the summer of 1956. About 10,000 representatives of the 15 Union republics won this right.

Soviet sportsmen hold the world champion titles for gymnastics, Greco-Roman wrestling, chess, marksmanship and several other sports.

At the XVIth Olympic Games held in Melbourne in November and December 1956, Soviet sportsmen and sportswomen contending with those of 70 other countries, won

98 Olympic medals (including 37 gold medals), far outstripping their strongest rival—the U.S. team—in the number of points and medals. Splendid results were achieved by the long-distance runner Vladimir Kuts, the gymnasts Larisa Latynina and Viktor Chukarin, the marksman Anatoly Bogdanov, the boxer Vladimir Yengibaryan, the weight-lifter Arkady Vorobyov and other well-known Soviet athletes.

The vast scope of Soviet sport is an earnest of future success.

INTERNATIONAL CULTURAL TIES OF THE SOVIET UNION

The Soviet Union wants to expand its friendly ties with other nations. Its cultural relations are growing in scale from year to year.

Hundreds of foreign delegations visit the Soviet Union every year. In 1955, 2,180 actors and artistes of 30 countries toured the Soviet Union at the invitation of the Soviet Ministry of Culture. The Soviet Union reciprocated with 2,500 in 1955 and more than 5,000 in 1956.

Cooperation between Soviet and foreign scientists is expanding. In 1956 about 900 scientists were sent abroad by the U.S.S.R. Academy of Sciences alone, about as many foreign scientists visited the Soviet Union. Scientists from the People's Democracies, from India, Japan, Sweden, Egypt and elsewhere attended the July 1955 session of the U.S.S.R. Academy of Sciences, devoted to the peaceful uses of atomic energy.

Soviet scientists take part in the work of 49 world scientific organizations. At the International Scientific and Technical Conference on Peaceful Uses of Atomic

Power, held in Geneva in August 1955, Soviet scientists read 102 papers on theoretical problems and the practical application of atomic energy for peaceful purposes.

The Soviet Union readily shares its scientific achievements with other countries. Foreign scientists acquaint themselves with Soviet research institutions and in their turn they acquaint the Soviet public with the scientific progress in their own countries. Many of them have visited the Soviet atomic power station, the first in the world.

In accordance with treaties concluded with the Chinese People's Republic, Poland, Czechoslovakia and other countries, the Soviet Union helps them in establishing experimental centres for nuclear physics and in using atomic energy for peaceful purposes. Under an agreement signed in 1956, Soviet specialists will build in Egypt a laboratory for atomic research.

Young scientists from the People's Democracies improve their knowledge at institutes of the U.S.S.R. Academy of Sciences, at universities, research institutions and laboratories.

Many young men and women from abroad study at Soviet higher schools. The Czechoslovak music critic Jiří Bajer, the Rumanian composer Anatol Vieru, the Bulgarian pianiste Snezhanka Barova, and many others have advanced their musical education in the Soviet Union.

The exchange of books is an effective form of cultural intercourse. The Library of the U.S.S.R. Academy of Sciences, the Lenin State Library, the Saltykov-Shchedrin Library in Leningrad, the All-Union Foreign Library in Moscow and other institutions exchange books with 84 foreign countries.

Over a million copies of Soviet newspapers and journals are sent abroad.

Foreign Literature, a Moscow journal, publishes translations of new books.

It has become traditional in the Soviet Union to celebrate the birth or commemorate the death anniversary of outstanding men of world culture.

Numerous exhibitions of foreign art are arranged each year. Recent exhibitions displayed specimens of the imitative art of Poland, Czechoslovakia, Finland, Hungary, China, India, Indonesia, France, Britain, and Belgium, Mexican and Italian drawings, works of Indian applied art, Japanese engravings, French books, Czechoslovak photography.

The exhibition of the Dresden Gallery paintings, which were saved from destruction by Soviet soldiers during World War II, was an outstanding event in the cultural life of the Soviet Union. Every day thousands of people admired Raphael's famous Madonna di S. Sisto, canvases by Dürer, Rubens, Rembrandt, Velazquez, Poussin and other famous artists. During the few months it was open, the exhibition was visited by 1,200,000 persons. The West German scientist Secker, who toured the Soviet Union, noted the great interest Soviet people take in art. "I saw the masterpieces of the Dresden Picture Gallery," said Secker, "which the Soviet Union has restored to the German people, and which is now on view at the Pushkin Museum. It is daily visited by thousands of Soviet citizens. I was deeply impressed by the wonderful restoration work carried out by Soviet experts, one cannot imagine anything better."

On the Soviet screen one can see Polish, Czechoslovak, Chinese, French, Italian, Indian, Mexican, Egyptian and

other foreign films. Foreign film festivals are held annually in the Soviet Union and Soviet films are shown in 61 countries.

Soviet people give guest actors and theatrical companies a warm welcome. Recent visitors were the Comédie Française, Indian film actors, a Polish theatre, the Prague National Theatre, Brazilian musicians, the Chinese Opera, the British Tennent company, the U.S. Everyman Opera, the Yugoslav Drama Theatre, a Rumanian dance group, and many others.

Theatrical troupes and artistes of the Soviet Union in their turn often go to foreign countries. The violinist D. Oistrakh and the pianist E. Gilels successfully toured the United States, the Uzbek National Ensemble, led by Tamara Khanum, performed in Britain, Norway, France, Austria, Poland, the German Democratic Republic, Hungary, Iran and Pakistan. The State Folk Dance Ensemble, headed by Igor Moiseyev, toured China, France, Britain, Czechoslovakia and Egypt. The Beryozka Dance Ensemble visited Yugoslavia, France, Egypt and other countries. The appearances of Moscow Circus performers in Western Europe were an invariable success. The Bolshoi Theatre ballet group was acclaimed in Britain.

In 1956, 220 foreign sports delegations came to the Soviet Union, and 191 Soviet delegations went abroad.

Travel is growing. Thousands of tourists from France, Britain, the United States, Finland, Denmark and other countries visited the Soviet Union in 1956. Soviet tourists visited Sweden, Belgium, Italy, France, Finland, India, Poland, Yugoslavia, Bulgaria, Czechoslovakia, and other countries.

Friendly cooperation in literature, science, art and sports is making particularly fruitful progress between

the U.S.S.R. and the Chinese People's Republic and the other People's Democracies. The Soviet people also strive to strengthen cultural ties with all other countries. They maintain that differences in social systems cannot hinder cultural exchange. The experience of Soviet cultural co-operation with India, Burma, Egypt, and many other countries bears them out.

The all-round development of economic, scientific and cultural relations will greatly contribute to peaceful international cooperation.

Soviet culture full of optimism, and of confidence in the triumph of democratic ideals, is an active force in the struggle of world peace. Soviet books and newspapers, radio broadcasts and motion pictures, the entire system of public education are inspired with the desire for peace and friendship between nations.

It is universally acknowledged that the Soviet people, who are engaged in creative labour on an immense scale, want peace.

Prime Minister Nehru of India declared during his visit to the Soviet Union at a Soviet-Indian friendship meeting in June 1955: "Wherever I went in the Soviet Union I have everywhere met with the passionate longing for peace.... I am deeply impressed by the great achievments of the Soviet Union. I saw the transformation of this enormous country, achieved thanks to the industry of its people and to the great striving which advances it forward along the path of improving its own conditions. I am amazed at the music and dances, and also at the incomparable ballet that I saw. The greatest impression I received was the enormous care of the state and the people for the children and the young generation of this great country."

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The Soviet people defend peace because peace and constructive work are indissolubly linked together. Every day of peace brings the Soviet people further progress in the national economy, in science and culture, in the standards of living, and is a step forward in the strengthening of the Union of Soviet Socialist Republics, a workers' and peasants' state.